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QUARTERLY REPORT ON DRIFTING BUOYS IN THE NORTH ATLANTIC

By Sue Holton
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Report No 61

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25th April 2002

This report has not been published.
Permission to quote from it should be obtained from the
Group Head of Observations Supply.

1. INTRODUCTION

Drifting buoys operated by European countries, the United States, Canada and E.G.O.S. (European Group on Ocean Stations) provide valuable meteorological data in the North Atlantic Ocean. This report is a summary of the performance of these buoys giving information on the number of buoys operating, the accuracy of reported locations and data quality, timeliness and availability. It is compiled by looking at observations received in the Met. Office Meteorological Data Base (Met.D.B.) and by comparisons of observations with background fields from the Met. Office forecast model. Additional information on buoy operations and data quality is extracted from E.G.O.S. Technical Secretariat reports.

2. GENERAL PERFORMANCE

The following few sub-sections describe the general performance of the drifting buoys throughout the quarter.

(a) Location Accuracy

58 out of 64 of the buoys reporting, gave a '% of observations with acceptable positions' greater than 95% (53 out of 60 last quarter).

(b) Data timeliness

(see note 9 of section 6 for definition of terms.)

Timeliness	Last quarter.	This quarter
Very Good	19	22
Good	35	40
Satisfactory	4	2
Poor	0	0
Very poor	2	0
Total no. of buoys	60	64

c) Data availability

(see note 9 of section 6 for definition of terms.)

Availability	South of 50 deg N		North of 50 deg N	
	Previous Quarter	Present Quarter	Previous Quarter	Present Quarter
Very Good	7	4	18	12
Good	16	12	2	9
Satisfactory	6	9	5	7
Poor	4	7	1	4
Very Poor	1	0	0	0

The total number of buoy days in the quarter was 4868 [obtained by summing the number of reporting days for each buoy] (last quarter the total was 4588) and the number of 'buoy hours' with at least one observation was 95988 (compared with 95928 last quarter). Thus, the mean number of hours per day, for days with at least one observation (averaged over all buoys operating in the area) was 19.72 (last quarter the figure was 20.91).

3. SUMMARY OF PRESSURE PERFORMANCE

(a) Buoy deployments, etc.

North of 50deg N

There were 22 buoys reporting at the beginning of the period. 22 buoys were operating at the end of the period.

10 buoys were deployed during the period (44764, 44779, 44780, 62694, 62695, 62696, 62697, 63536, 63663 and 64553)

10 buoys ceased reporting (44546, 44548, 44760, 44771, 44776, 62695, 64551, 65581, 65595 and 65602).

South of 50deg N

There were 32 buoys reporting at the beginning of the period. 27 buoys were reporting at the end of the period.

8 buoys were deployed during the period (41657, 44513, 44514, 44515, 44516, 44517, 44763, and 44766).

2 buoys ceased reporting (44766 and 62519

(b) Data Quality - Pressure

Revised RMS Differences

The technique used to assess the quality of pressure data in this report is based on the Revised RMS differences between the observations and the background field from the Global Forecast Model (see note 8 in Explanatory Notes). For buoys south of 50°N the Revised RMS differences should be less than (or equal to) 2.0 hPa and for buoys north of 50°N they should be below (or equal to) 3.0 hPa. The buoys whose revised RMS differences were found to lie outside these limits have had their performances described as 'suspect' and are included in the section below. Examination of the time-series plots (see Annex B) indicates the performances of these buoys :-

44513 - Pressure from this buoy showed a larger then normal scatter with a negative bias until it ceased reporting pressure on 18/03/02.

44514 - Pressure from this buoy developed a larger then normal scatter toward the end of the quarter until it ceased reporting pressure on 21/03/02.

44515 - Pressure from this buoy showed a larger than normal scatter with a negative bias throughout the quarter until it ceased reporting pressure on 18/03/02.

44516 - Pressure from this buoy showed a larger than normal scatter throughout the quarter with a negative bias until it ceased reporting pressure on 21/03/02.

44517 - Pressure from this buoy also showed a larger than normal scatter throughout the quarter.

44616 – Pressure from this buoy became erratic towards the end of the quarter.

44729 – This buoy was erratic for a few days towards the end of January.

44765 – Data from this buoy showed an increasing positive bias for the few days it was reporting pressure, until it ceased on 09/01/02.

64549 - Data from this buoy was erratic throughout the quarter.

64551 – Date from this buoy was intermittent until it ceased reporting altogether on 07/02/02.

Biases

13 buoys (excluding those mentioned in the previous section) showed pressure biases greater than 0.5 hPa (pressure biases are determined using the mean value for unflagged data from Annex A). Those buoys whose pressure data showed a bias of greater than 0.5 hPa have had their performance described as 'suspect'.

WMO No.	Buoy bias (hPa)	Period of reports
41659	0.9	01/01 – 31/03
44546	-0.6	01/01 – 28/02
44549	0.6	01/01 – 31/03
44743	-0.6	01/01 – 31/03
44760	-0.8	01/01 – 22/01
44779	-0.8	28/01 – 31/03
62598	-0.6	01/01 – 31/03
65581	-0.9	01/01 – 06/02

Summary of Pressure Performance

Pressure Summary	Last Quarter	This Quarter
Acceptable	42	46
Suspect – RMS	5	10
Suspect – Bias	13	8
Total no. of buoys	60	64

4) Air Temperatures

The following table shows the mean and standard deviation of observation minus background differences for air temperatures.

(Note : The calculations below exclude the majority of gross errors. However, gross errors within +/-20 °C of the background value are included. Therefore, in some instances, the figures may be slightly misleading.)

	Air Temperature				Air Temperature		
WMO No.	Mean	St.Dev	No. of Obs	WMO No.	Mean	St. Dev	No. of Obs
44743	-0.34	3.00	1293	44760	-0.27	0.76	95
44765	0.27	1.12	918	44779	-0.41	1.14	1175
62598	-0.25	1.17	1812	63536	-0.36	0.76	649
63663	2.00	5.97	657	64549	-0.03	1.54	2390
64551	-0.20	0.50	125	64553	3.18	1.58	404
65581	-0.71	1.26	457	65595	-0.02	1.36	3624
65602	-0.30	0.98	3754				

Summary

Buoys 63663 (2.00) and 64553 (3.18) showed significant **air temperature** bias. Buoy 44743 (3.00) and 63663 (5.97) showed significant **standard deviations** for the quarter.

(5) Winds

The following table shows the mean and standard deviation of observation minus background differences for wind speed and direction.

	Wind Speed (kt)			Wind Direction (deg)		
WMO No.	Mean	St. Dev.	No. of Obs	Mean	St. Dev.	No. of Obs
41523	-0.62	9.31	571	-11.54	59.24	516
41652	0.69	3.85	1732	-4.92	30.30	1508
62520	-0.42	5.99	1753	4.09	20.48	1735

Summary

Buoy 41523 showed a significant **wind speed** bias (9.31) and also significant standard deviations (59.24) for **wind direction.**

Note: Only 3 buoys reported wind speed and direction for this quarter.

6. EXPLANATORY NOTES:

1. Buoy owners are as follows,

CA	- Canada	P	- Portugal
F	- France	UK	- United Kingdom
D	- Germany	US	- United States
N	- Norway	IC	- Iceland
NL	- Netherlands	EG	- EGOS
IR	- Ireland		

2. Number of observations received is the number received at Bracknell in the Meteorological Data Base (Met.DB). If identical reports are received which have originated at different Collecting Centres, the earliest one received at Bracknell is stored in the Met.DB.

3. An observation with valid Time and Date is one that contains no coding errors in the Date/Time group.

4. An acceptable position for an observation is within a distance d of the last acceptable position where d=vt and,

   v = maximum drift speed = 1/4 knot
   t = time between observations.

5. The percentage of elements present is calculated from the total number of observations received.

6. The delay is (Time of Receipt at Bracknell) - (Time of Observation).

7. The mean number of observations per day is calculated from the total number of observations received divided by the number of days in the period. It therefore includes 'quasi-identical' observations, i.e. those made within a few minutes of one another. For this reason the mean number of hours per day with at least one observation and the % of hour periods without an observation has been included, where an 'hour period' is defined as the period from HH-30 to HH+29 minutes.

8. Mean (OB-BG) is the mean value of (Observation-Background) Pressure, where the Background is the 6-hour forecast from the Global Forecast Model. RMS (OB-BG) is the Root Mean Square value of (Observation- Background) Pressure differences.

   Unflagged data are those data used in model analyses.

   Flagged data (i.e. unused observations) are those observations of suspect quality and all observations reported by a buoy at a frequency greater than 5 times every 6 hours, with accepted observations being at least one hour apart. Thus, those buoys which report most frequently have a higher percentage of flagged data.

   The Mean calculated over Unflagged Data gives an indication of the instrument bias, since any gross errors have been excluded from the calculation.

   The Revised RMS is based on all data except for the few that contain gross errors (as indicated on the time-series graphs - see Annex B).

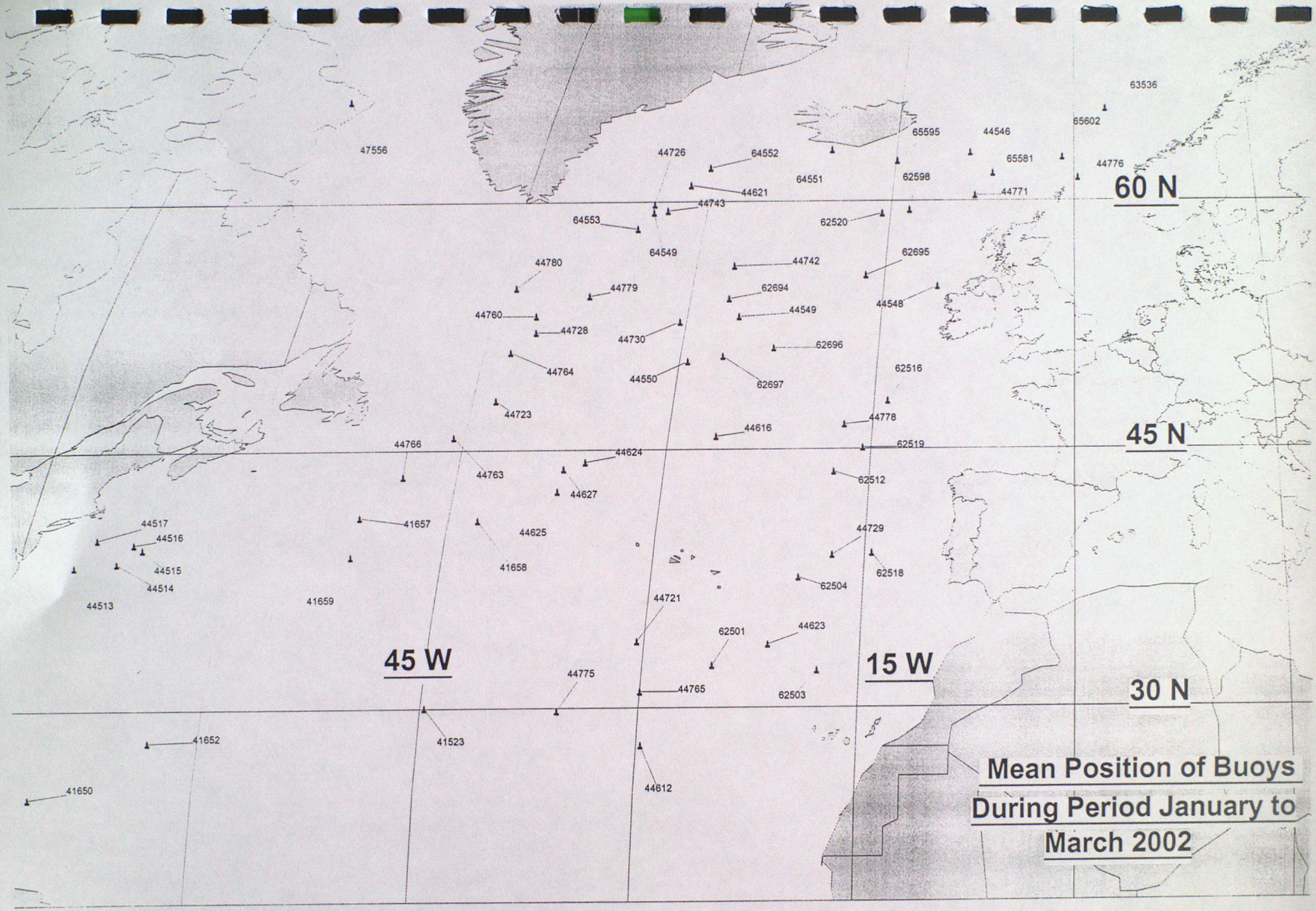
9. The performance categories are defined in the table below.

Performance	Availability (mean no. of obs/day)	Timeliness (median delay in mins)
Very Good	> 35	< 60
Good	25 - 35	60 - 119
Satisfactory	15 - 24	120 - 179
Poor	5 - 14	180 - 239
Very Poor	< 5	> 240

(N.B. WMO requirements state the need for only 4 observations per day from marine stations.)

The pressure quality is assessed from the Revised RMS and the Mean for unflagged data).

Performance	Pressure Quality (in hPa)			
	North of 50 degN		South of 50 degN	
	RMS	MEAN	RMS	MEAN
Acceptable	<= 3.0	<= 0.5	<= 2.0	<= 0.5
Suspect	> 3.0	> 0.5	> 2.0	> 0.5


63536
65602
65595
44546
47556
44726
64552
65581
44776
64551
62598
60 N
44621
44771
44743
64553
62520
64549
62695
44780
44742
44779
62694
44548
44760
44549
44728
44730
62696
44764
62516
44550
62697
44723
44778
44616
45 N
44766
62519
44624
44763
62512
44627
44517
41657
44729
44625
44516
62518
44515
41658
62504
44514
44513
41659
44721
62501
44623
45 W
15 W
44775
44765
62503
30 N
41652
41523
41650
44612
Mean Position of Buoys
During Period January to
March 2002

Annex A - TABLE OF STATISTICS

WMO No./Country	41523/US	41650/US	41652/US
Argos Id No.	28840	7776	7897
Period Within Area	01/01 - 31/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	30.0	24.9	28.1
Mean Longitude	-44.7	-71.1	-63.4
No. of Obs Received	1262	2083	1865
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present			
Pressure	92.2	100.0	100.0
P. Tendency	0.0	99.8	99.8
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	56.6/ 91.0	0.0/ 0.0	99.6/ 99.0
Sea-Surface Temp.	93.0	99.8	99.7
Median delay (min)	32	117	115
Number of days	90	90	90
Mean No. of obs/day	14.0	23.1	20.7
No. of Hours with obs	1036	1849	1845
Mean no. of hours/day with obs	11.5	20.5	20.5
% of hour periods without an ob	51.9	14.4	14.6
Mean (Ob-Bg)	0.2	0.5	-0.2
RMS (Ob-Bg) **unflagged data**	0.9	0.7	0.6
Mean (Ob-Bg)	0.2	0.5	-0.2
RMS (Ob-Bg) **all data**	1.0	0.7	0.6
Revised RMS (Ob-Bg)	1.0	0.7	0.6
% of data flagged	34	13	2
Operating at end of period	YES	YES	YES
Performance			
Availability	Poor	Acceptable	Acceptable
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Very Good	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	41657/US	41658/US	41659/US
Argos Id No.	27063	27064	27065
Period Within Area	04/01 - 31/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	41.1	40.9	38.8
Mean Longitude	-51.4	-42.9	-51.5
No. of Obs Received	1607	2111	1993
% of obs with Acceptable Position	89.8	99.7	99.8
% of Present			
Pressure	99.8	99.8	99.9
P. Tendency	99.3	98.5	99.8
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	87.4	99.7	99.8
Median delay (min)	109	105	102
Number of days	87	90	90
Mean No. of obs/day	18.5	23.5	22.1
No. of Hours with obs	1505	1909	1967
Mean no. of hours/day with obs	17.3	21.2	21.9
% of hour periods without an ob	27.8	11.5	8.8
Mean (Ob-Bg)	0.0	-0.5	0.9
RMS (Ob-Bg) **unflagged data**	1.3	1.3	1.3
Mean (Ob-Bg)	0.2	-0.2	0.9
RMS (Ob-Bg) **all data**	1.9	3.5	1.7
Revised RMS (Ob-Bg)	1.7	1.7	1.4
% of data flagged	9	13	2
Operating at end of period	YES	YES	YES
Performance			
Availability	Acceptable	Acceptable	Acceptable
Pressure Quality	Acceptable	Acceptable	Suspect
Timeliness	Good	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	44513/US	44514/US	44515/US
Argos Id No.	28843	28864	28865
Period Within Area	07/01 - 31/03	07/01 - 31/03	07/01 - 31/03
Mean Latitude	38.3	38.5	39.3
Mean Longitude	-71.0	-68.0	-66.4
No. of Obs Received	1066	1351	1083
% of obs with Acceptable Position	100.0	100.0	100.0
% of Present			
Pressure	83.7	90.4	83.7
P. Tendency	99.8	90.1	99.5
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.7	99.8	99.8
Median delay (min)	62	59	56
Number of days	84	84	84
Mean No. of obs/day	12.7	16.1	12.9
No. of Hours with obs	1053	1025	1075
Mean no. of hours/day with obs	12.5	12.2	12.8
% of hour periods without an ob	47.5	48.9	46.4
Mean (Ob-Bg)	-0.4	0.0	-0.4
RMS (Ob-Bg) **unflagged data**	2.6	1.8	2.7
Mean (Ob-Bg)	-10.6	-0.8	-12.5
RMS (Ob-Bg) **all data**	16.7	6.5	17.9
Revised RMS (Ob-Bg)	13.4	6.5	14.1
% of data flagged	63	46	75
Operating at end of period	YES	YES	YES
Performance			
Availability	Poor	Acceptable	Poor
Pressure Quality	Suspect	Suspect	Suspect
Timeliness	Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	44516/US	44517/US	44546/UK
Argos Id No.	28866	28867	25374
Period Within Area	07/01 - 31/03	07/01 - 31/03	01/01 - 28/02
Mean Latitude	39.6	39.9	63.1
Mean Longitude	-67.1	-69.8	-8.8
No. of Obs Received	1075	1122	2461
% of obs with Acceptable Position	99.7	100.0	97.4
% of Present			
Pressure	87.3	99.8	99.8
P. Tendency	87.2	99.7	99.8
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.5	99.6	99.8
Median delay (min)	57	61	55
Number of days	84	84	59
Mean No. of obs/day	12.8	13.4	41.7
No. of Hours with obs	1064	1061	1348
Mean no. of hours/day with obs	12.7	12.6	22.8
% of hour periods without an ob	46.9	47.1	3.6
Mean (Ob-Bg)	-0.7	-1.3	-0.6
RMS (Ob-Bg) **unflagged data**	2.8	3.4	1.2
Mean (Ob-Bg)	-8.6	-8.2	-0.7
RMS (Ob-Bg) **all data**	13.8	14.5	1.3
Revised RMS (Ob-Bg)	13.3	12.9	1.3
% of data flagged	81	84	46
Operating at end of period	YES	YES	NO
Performance			
Availability	Poor	Poor	Very Good
Pressure Quality	Suspect	Suspect	Suspect
Timeliness	Very Good	Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	44548/UK	44549/UK	44550/UK
Argos Id No.	27617	22648	23703
Period Within Area	01/01 - 08/02	01/01 - 31/03	01/01 - 31/03
Mean Latitude	54.8	53.0	50.3
Mean Longitude	-10.8	-26.0	-29.4
No. of Obs Received	894	3305	3295
% of obs with Acceptable Position	95.1	97.9	97.9
% of Present			
Pressure	99.7	99.9	99.8
P. Tendency	99.4	99.4	99.4
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.8	99.8	99.9
Median delay (min)	128	63	62
Number of days	39	90	90
Mean No. of obs/day	22.9	36.7	36.6
No. of Hours with obs	633	2029	2063
Mean no. of hours/day with obs	16.2	22.5	22.9
% of hour periods without an ob	31.3	6.0	4.5
Mean (Ob-Bg)	-0.2	0.6	0.0
RMS (Ob-Bg) **unflagged data**	1.1	1.5	1.4
Mean (Ob-Bg)	-0.2	0.8	0.2
RMS (Ob-Bg) **all data**	1.1	2.1	2.3
Revised RMS (Ob-Bg)	1.1	1.8	1.8
% of data flagged	29	40	38
Operating at end of period	NO	YES	YES
Performance			
Availability	Acceptable	Very Good	Very Good
Pressure Quality	Acceptable	Suspect	Acceptable
Timeliness	Acceptable	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	44612/UK	44616/UK	44621/UK
Argos Id No.	27619	17149	17150
Period Within Area	01/01 - 31/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	27.8	45.8	61.1
Mean Longitude	-29.7	-26.5	-31.8
No. of Obs Received	2227	3334	4738
% of obs with Acceptable Position	97.3	93.5	98.8
% of Present			
Pressure	100.0	99.8	99.9
P. Tendency	99.7	99.7	99.9
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.9	99.9	99.9
Median delay (min)	103	81	60
Number of days	90	90	90
Mean No. of obs/day	24.7	37.0	52.6
No. of Hours with obs	2109	2083	2128
Mean no. of hours/day with obs	23.4	23.1	23.6
% of hour periods without an ob	2.4	3.6	1.5
Mean (Ob-Bg)	-0.3	0.0	0.5
RMS (Ob-Bg) **unflagged data**	0.7	1.2	1.3
Mean (Ob-Bg)	-0.4	0.1	0.5
RMS (Ob-Bg) **all data**	0.9	2.6	1.4
Revised RMS (Ob-Bg)	0.9	2.6	1.4
% of data flagged	4	40	56
Operating at end of period	YES	YES	YES
Performance			
Availability	Acceptable	Very Good	Very Good
Pressure Quality	Acceptable	Suspect	Acceptable
Timeliness	Good	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	44623/UK	44624/UK	44625/UK
Argos Id No.	27624	17151	17153
Period Within Area	01/01 - 31/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	33.6	44.3	42.6
Mean Longitude	-21.4	-35.8	-37.5
No. of Obs Received	3254	2680	2308
% of obs with Acceptable Position	99.8	100.0	99.0
% of Present			
Pressure	99.6	99.9	100.0
P. Tendency	99.3	99.6	99.8
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.5	99.7	99.9
Median delay (min)	145.5	100	81
Number of days	90	90	90
Mean No. of obs/day	36.2	29.8	25.6
No. of Hours with obs	1983	2099	2102
Mean no. of hours/day with obs	22.0	23.3	23.4
% of hour periods without an ob	7.9	2.8	2.7
Mean (Ob-Bg)	0.3	0.2	0.0
RMS (Ob-Bg) **unflagged data**	0.7	0.9	1.0
Mean (Ob-Bg)	0.2	0.2	0.0
RMS (Ob-Bg) **all data**	2.0	1.0	1.2
Revised RMS (Ob-Bg)	0.9	1.0	1.2
% of data flagged	39	21	8
Operating at end of period	YES	YES	YES
Performance			
Availability	Very Good	Good	Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Acceptable	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	44627/UK	44721/UK	44723/UK
Argos Id No.	13698	18702	21562
Period Within Area	01/01 - 31/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	43.9	33.8	48.0
Mean Longitude	-37.3	-30.5	-43.3
No. of Obs Received	2110	2407	3871
% of obs with Acceptable Position	97.6	98.1	98.9
% of Present			
Pressure	99.8	99.9	99.8
P. Tendency	98.9	99.7	99.2
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	100.0	99.8	99.8
Median delay (min)	102	102	101
Number of days	90	90	90
Mean No. of obs/day	23.4	26.7	43.0
No. of Hours with obs	1874	2075	2111
Mean no. of hours/day with obs	20.8	23.1	23.5
% of hour periods without an ob	13.1	3.9	2.3
Mean (Ob-Bg)	-0.4	0.3	0.3
RMS (Ob-Bg) **unflagged data**	1.2	0.9	1.3
Mean (Ob-Bg)	-0.2	0.3	0.5
RMS (Ob-Bg) **all data**	2.2	1.1	2.6
Revised RMS (Ob-Bg)	1.4	1.1	1.8
% of data flagged	12	14	47
Operating at end of period	YES	YES	YES
Performance			
Availability	Acceptable	Good	Very Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Good	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	44726/UK	44728/UK	44729/UK
Argos Id No.	23460	23553	25375
Period Within Area	01/01 - 31/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	59.9	52.1	38.8
Mean Longitude	-34.4	-41.4	-17.3
No. of Obs Received	4641	3549	2346
% of obs with Acceptable Position	97.9	97.9	97.1
% of Present			
Pressure	99.9	99.9	99.6
P. Tendency	99.6	99.6	98.6
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.9	0.0	99.2
Median delay (min)	64	68	93
Number of days	90	90	90
Mean No. of obs/day	51.6	39.4	26.1
No. of Hours with obs	2116	2072	1797
Mean no. of hours/day with obs	23.5	23.0	20.0
% of hour periods without an ob	2.0	4.0	16.1
Mean (Ob-Bg)	0.2	-0.2	0.6
RMS (Ob-Bg) **unflagged data**	1.3	1.5	1.4
Mean (Ob-Bg)	0.3	0.1	0.2
RMS (Ob-Bg) **all data**	1.9	2.6	2.6
Revised RMS (Ob-Bg)	1.7	2.1	2.6
% of data flagged	55	43	27
Operating at end of period	YES	YES	YES
Performance			
Availability	Very Good	Very Good	Good
Pressure Quality	Acceptable	Acceptable	Suspect
Timeliness	Good	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	44730/UK	44742/UK	44743/D
Argos Id No.	23856	21667	4270
Period Within Area	01/01 - 31/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	52.7	56.1	59.5
Mean Longitude	-30.5	-27.0	-33.2
No. of Obs Received	3753	3680	2960
% of obs with Acceptable Position	96.3	96.4	99.3
% of Present			
Pressure	99.8	99.9	95.8
P. Tendency	99.4	99.8	93.1
Air Temperature	0.0	0.0	47.7
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.8	99.8	12.1
Median delay (min)	59	56	15
Number of days	90	90	90
Mean No. of obs/day	41.7	40.9	32.9
No. of Hours with obs	2075	2078	1557
Mean no. of hours/day with obs	23.1	23.1	17.3
% of hour periods without an ob	3.9	3.8	27.8
Mean (Ob-Bg)	0.0	0.0	-0.6
RMS (Ob-Bg) **unflagged data**	1.5	1.1	1.8
Mean (Ob-Bg)	0.3	0.0	-0.7
RMS (Ob-Bg) **all data**	3.7	2.0	2.9
Revised RMS (Ob-Bg)	2.1	1.6	2.4
% of data flagged	46	44	59
Operating at end of period	YES	YES	YES
Performance			
Availability	Very Good	Very Good	Good
Pressure Quality	Acceptable	Acceptable	Suspect
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	44760/D	44763/UK	44764/UK
Argos Id No.	9307	17574	23913
Period Within Area	01/01 - 22/01	07/01 - 31/03	14/02 - 31/03
Mean Latitude	53.1	45.8	50.9
Mean Longitude	-41.7	-45.8	-43.0
No. of Obs Received	122	2327	1067
% of obs with Acceptable Position	100.0	100.0	99.9
% of Present			
Pressure	88.5	99.9	99.5
P. Tendency	81.1	99.1	99.4
Air Temperature	83.6	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	80.3	99.7	99.7
Median delay (min)	52	99	72
Number of days	22	84	46
Mean No. of obs/day	5.5	27.7	23.2
No. of Hours with obs	111	1927	1029
Mean no. of hours/day with obs	5.0	22.9	22.4
% of hour periods without an ob	78.2	4.3	5.2
Mean (Ob-Bg)	-0.8	0.1	-0.1
RMS (Ob-Bg) **unflagged data**	1.4	1.3	1.2
Mean (Ob-Bg)	-0.8	0.4	-0.1
RMS (Ob-Bg) **all data**	1.5	2.6	1.3
Revised RMS (Ob-Bg)	1.5	1.5	1.3
% of data flagged	16	18	3
Operating at end of period	NO	YES	YES
Performance			
Availability	Poor	Good	Acceptable
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Very Good	Good	Good
Comments			

WMO No./Country	44765/UK	44766/UK	44771/UK
Argos Id No.	28466	23914	25377
Period Within Area	01/01 - 31/03	18/02 - 29/03	01/01 - 16/02
Mean Latitude	30.9	43.5	60.4
Mean Longitude	-30.0	-48.9	-8.2
No. of Obs Received	981	546	1447
% of obs with Acceptable Position	100.0	100.0	95.5
% of Present			
Pressure	9.4	99.8	99.6
P. Tendency	9.1	98.4	99.4
Air Temperature	99.5	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	0.0	66.7	99.7
Median delay (min)	25	86	80
Number of days	90	40	47
Mean No. of obs/day	10.9	13.6	30.8
No. of Hours with obs	927	515	895
Mean no. of hours/day with obs	10.3	12.9	19.0
% of hour periods without an ob	57.0	46.1	19.4
Mean (Ob-Bg)	0.6	-0.3	0.2
RMS (Ob-Bg) **unflagged data**	1.3	1.0	1.1
Mean (Ob-Bg)	1.8	-0.2	0.2
RMS (Ob-Bg) **all data**	9.5	1.1	1.4
Revised RMS (Ob-Bg)	4.8	1.1	1.4
% of data flagged	41	5	39
Operating at end of period	YES	NO	NO
Performance			
Availability	Poor	Poor	Good
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Very Good	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	44775/UK	44776/UK	44778/UK
Argos Id No.	25372	25371	25370
Period Within Area	01/01 - 31/03	01/01 - 11/03	01/01 - 31/03
Mean Latitude	29.8	61.5	46.5
Mean Longitude	-35.6	0.3	-17.1
No. of Obs Received	2257	3434	2993
% of obs with Acceptable Position	98.4	97.4	97.8
% of Present			
Pressure	99.9	99.9	99.9
P. Tendency	99.9	99.9	99.7
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.8	99.8	99.7
Median delay (min)	95	73	78
Number of days	90	70	90
Mean No. of obs/day	25.1	49.1	33.3
No. of Hours with obs	2115	1613	2038
Mean no. of hours/day with obs	23.5	23.0	22.6
% of hour periods without an ob	2.1	3.2	5.6
Mean (Ob-Bg)	-0.5	-0.2	0.0
RMS (Ob-Bg) **unflagged data**	0.8	0.9	0.9
Mean (Ob-Bg)	-0.5	-0.3	0.0
RMS (Ob-Bg) **all data**	0.8	2.7	1.0
Revised RMS (Ob-Bg)	0.8	0.9	1.0
% of data flagged	5	54	32
Operating at end of period	YES	NO	YES
Performance			
Availability	Good	Very Good	Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Good	Good	Good
Comments			

WMO No./Country	44779/D	44780/IR	47556/CA
Argos Id No.	6669	1153	1106
Period Within Area	28/01 - 31/03	19/03 - 31/03	01/01 - 31/03
Mean Latitude	54.3	54.8	66.6
Mean Longitude	-37.9	-43.8	-63.4
No. of Obs Received	1316	250	1298
% of obs with Acceptable Position	97.3	100.0	93.2
% of Present			
Pressure	90.9	86.0	100.0
P. Tendency	88.8	79.2	0.0
Air Temperature	90.8	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	88.6	0.0	0.0
Median delay (min)	13	22	12
Number of days	63	13	90
Mean No. of obs/day	20.9	19.2	14.4
No. of Hours with obs	860	195	1046
Mean no. of hours/day with obs	13.7	15.0	11.6
% of hour periods without an ob	42.2	35.6	51.6
Mean (Ob-Bg)	-0.8	-0.4	0.3
RMS (Ob-Bg) **unflagged data**	1.8	0.8	1.5
Mean (Ob-Bg)	-0.7	-0.4	0.3
RMS (Ob-Bg) **all data**	3.2	0.8	1.5
Revised RMS (Ob-Bg)	2.0	0.8	1.5
% of data flagged	48	36	36
Operating at end of period	YES	YES	YES
Performance			
Availability	Acceptable	Acceptable	Poor
Pressure Quality	Suspect	Acceptable	Acceptable
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	62501/F	62503/F	62504/F
Argos Id No.	7139	17926	17928
Period Within Area	01/01 - 31/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	32.4	32.1	37.5
Mean Longitude	-25.2	-17.9	-19.6
No. of Obs Received	2342	2388	2301
% of obs with Acceptable Position	97.7	94.3	97.5
% of Present			
Pressure	99.9	99.8	99.7
P. Tendency	99.7	99.6	99.5
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.8	99.6	99.6
Median delay (min)	109	99	98
Number of days	90	90	90
Mean No. of obs/day	26.0	26.5	25.6
No. of Hours with obs	2057	2096	1990
Mean no. of hours/day with obs	22.9	23.3	22.1
% of hour periods without an ob	4.8	3.0	7.9
Mean (Ob-Bg)	0.3	-0.4	0.1
RMS (Ob-Bg) **unflagged data**	0.7	0.8	0.7
Mean (Ob-Bg)	0.3	-0.4	0.1
RMS (Ob-Bg) **all data**	0.7	1.4	0.7
Revised RMS (Ob-Bg)	0.7	0.8	0.7
% of data flagged	12	12	14
Operating at end of period	YES	YES	YES
Performance			
Availability	Good	Good	Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Good	Good	Good
Comments			

WMO No./Country	62512/F	62516/F	62518/F
Argos Id No.	28692	28696	28697
Period Within Area	01/01 - 31/03	01/01 - 31/03	01/01 - 31/03
Mean Latitude	43.7	47.9	38.9
Mean Longitude	-17.6	-14.0	-14.5
No. of Obs Received	2669	2696	3449
% of obs with Acceptable Position	95.4	95.9	97.4
% of Present			
Pressure	99.8	99.7	100.0
P. Tendency	99.6	99.4	99.8
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.7	99.6	99.7
Median delay (min)	90	85	106
Number of days	90	90	90
Mean No. of obs/day	29.7	30.0	38.3
No. of Hours with obs	1958	1946	2102
Mean no. of hours/day with obs	21.8	21.6	23.4
% of hour periods without an ob	9.4	9.9	2.7
Mean (Ob-Bg)	0.0	-0.1	-0.1
RMS (Ob-Bg) **unflagged data**	1.4	1.0	0.8
Mean (Ob-Bg)	0.1	0.0	-0.1
RMS (Ob-Bg) **all data**	2.2	2.9	1.0
Revised RMS (Ob-Bg)	1.9	1.3	1.0
% of data flagged	28	28	40
Operating at end of period	YES	YES	YES
Performance			
Availability	Good	Good	Very Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Good	Good	Good
Comments			

WMO No./Country	62519/F	62520/F	62598/N
Argos Id No.	28698	32783	2294
Period Within Area	01/01 - 20/01	01/01 - 31/03	01/01 - 31/03
Mean Latitude	45.1	59.3	59.5
Mean Longitude	-15.6	-15.7	-13.5
No. of Obs Received	444	1908	2129
% of obs with Acceptable Position	100.0	100.0	99.0
% of Present			
Pressure	99.3	99.6	89.7
P. Tendency	97.3	99.1	86.5
Air Temperature	0.0	0.0	87.9
Wind Speed/Dir	0.0/ 0.0	99.4/ 99.2	0.0/ 0.0
Sea-Surface Temp.	0.0	99.6	87.7
Median delay (min)	101.5	87	16
Number of days	20	90	90
Mean No. of obs/day	22.2	21.2	23.7
No. of Hours with obs	434	1636	1270
Mean no. of hours/day with obs	21.7	18.2	14.1
% of hour periods without an ob	8.6	24.2	41.2
Mean (Ob-Bg)	0.1	-0.1	-0.6
RMS (Ob-Bg) **unflagged data**	0.7	1.2	1.5
Mean (Ob-Bg)	0.1	-0.1	-0.8
RMS (Ob-Bg) **all data**	0.7	1.3	3.1
Revised RMS (Ob-Bg)	0.7	1.3	1.6
% of data flagged	1	15	51
Operating at end of period	NO	YES	YES
Performance			
Availability	Acceptable	Acceptable	Acceptable
Pressure Quality	Acceptable	Acceptable	Suspect
Timeliness	Good	Good	Very Good
Comments			

Annex A - cont'd

WMO No./Country	62519/F	62520/F	62598/N
Argos Id No.	28698	32783	2294
Period Within Area	01/01 - 20/01	01/01 - 31/03	01/01 - 31/03
Mean Latitude	45.1	59.3	59.5
Mean Longitude	-15.6	-15.7	-13.5
No. of Obs Received	444	1908	2129
% of obs with Acceptable Position	100.0	100.0	99.0
% of Present			
Pressure	99.3	99.6	89.7
P. Tendency	97.3	99.1	86.5
Air Temperature	0.0	0.0	87.9
Wind Speed/Dir	0.0/ 0.0	99.4/ 99.2	0.0/ 0.0
Sea-Surface Temp.	0.0	99.6	87.7
Median delay (min)	101.5	87	16
Number of days	20	90	90
Mean No. of obs/day	22.2	21.2	23.7
No. of Hours with obs	434	1636	1270
Mean no. of hours/day with obs	21.7	18.2	14.1
% of hour periods without an ob	8.6	24.2	41.2
Mean (Ob-Bg)	0.1	-0.1	-0.6
RMS (Ob-Bg)	0.7	1.2	1.5
unflagged data			
Mean (Ob-Bg)	0.1	-0.1	-0.8
RMS (Ob-Bg)	0.7	1.3	3.1
all data			
Revised RMS (Ob-Bg)	0.7	1.3	1.6
% of data flagged	1	15	51
Operating at end of period	NO	YES	YES
Performance			
Availability	Acceptable	Acceptable	Acceptable
Pressure Quality	Acceptable	Acceptable	Suspect
Timeliness	Good	Good	Very Good
Comments			

WMO No./Country	62694/UK	62695/UK	62696/UK
Argos Id No.	17577	18000	18222
Period Within Area	08/01 - 31/03	08/01 - 12/03	08/01 - 31/03
Mean Latitude	54.1	55.5	51.1
Mean Longitude	-27.0	-16.5	-23.0
No. of Obs Received	2615	1847	2526
% of obs with Acceptable Position	98.9	98.6	98.9
% of Present			
Pressure	99.9	99.7	99.8
P. Tendency	99.6	99.2	99.4
Air Temperature	0.0	0.0	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	7.4	40.0	99.7
Median delay (min)	69	67	71
Number of days	83	64	83
Mean No. of obs/day	31.5	28.9	30.4
No. of Hours with obs	1871	1425	1856
Mean no. of hours/day with obs	22.5	22.3	22.4
% of hour periods without an ob	6.0	6.3	6.8
Mean (Ob-Bg)	0.2	0.1	0.0
RMS (Ob-Bg) **unflagged data**	1.3	1.1	1.3
Mean (Ob-Bg)	0.5	0.1	0.0
RMS (Ob-Bg) **all data**	2.3	1.3	3.8
Revised RMS (Ob-Bg)	1.9	1.2	1.5
% of data flagged	30	23	28
Operating at end of period	YES	NO	YES
Performance			
Availability	Good	Good	Good
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Good	Good	Good
Comments			

Annex A - cont'd

WMO No./Country	62697/UK	63536/UK	63663/D
Argos Id No.	19894	3679	9359
Period Within Area	11/01 - 31/03	07/03 - 31/03	19/02 - 31/03
Mean Latitude	50.6	65.9	76.8
Mean Longitude	-26.8	2.7	-14.5
No. of Obs Received	2505	750	719
% of obs with Acceptable Position	98.4	100.0	100.0
% of Present			
Pressure	99.7	90.1	97.8
P. Tendency	98.7	28.1	0.0
Air Temperature	0.0	89.9	96.2
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	99.7	67.9	0.0
Median delay (min)	71	24	71
Number of days	80	25	41
Mean No. of obs/day	31.3	30.0	17.5
No. of Hours with obs	1814	462	712
Mean no. of hours/day with obs	22.7	18.5	17.4
% of hour periods without an ob	5.0	22.0	26.7
Mean (Ob-Bg)	-0.3	-0.1	0.0
RMS (Ob-Bg) **unflagged data**	1.5	0.9	1.0
Mean (Ob-Bg)	0.1	-0.1	0.1
RMS (Ob-Bg) **all data**	3.0	1.1	1.8
Revised RMS (Ob-Bg)	2.0	1.1	1.8
% of data flagged	29	47	1
Operating at end of period	YES	YES	YES
Performance			
Availability	Good	Good	Acceptable
Pressure Quality	Acceptable	Acceptable	Acceptable
Timeliness	Good	Very Good	Good
Comments			

WMO No./Country	64549//N	64551/D	64552/UK
Argos Id No.	3678	6669	21104
Period Within Area	01/01 - 31/03	01/01 - 07/02	01/01 - 31/03
Mean Latitude	59.4	63.3	62.2
Mean Longitude	-34.3	-20.5	-30.5
No. of Obs Received	3685	384	2965
% of obs with Acceptable Position	83.0	62.2	98.9
% of Present			
Pressure	58.0	93.8	99.9
P. Tendency	28.1	91.9	99.7
Air Temperature	66.9	34.1	0.0
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	81.0	92.7	99.9
Median delay (min)	16	11	58
Number of days	90	38	90
Mean No. of obs/day	40.9	10.1	32.9
No. of Hours with obs	1538	297	2038
Mean no. of hours/day with obs	17.1	7.8	22.6
% of hour periods without an ob	28.7	66.7	5.6
Mean (Ob-Bg)	-0.8	-1.2	-0.1
RMS (Ob-Bg) **unflagged data**	2.1	2.2	1.4
Mean (Ob-Bg)	-1.1	-2.6	0.0
RMS (Ob-Bg) **all data**	3.5	4.7	1.9
Revised RMS (Ob-Bg)	2.8	4.2	1.7
% of data flagged	66	44	32
Operating at end of period	YES	NO	YES
Performance			
Availability	Very Good	Poor	Good
Pressure Quality	Suspect	Suspect	Acceptable
Timeliness	Very Good	Very Good	Very Good
Comments			

Annex A - cont'd

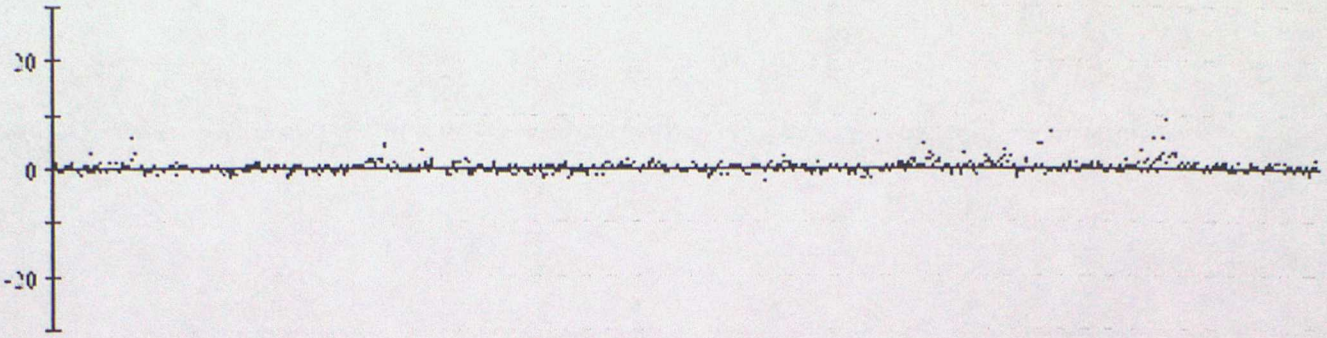
WMO No./Country	64553/IR	65581/IR	65595/NL
Argos Id No.	3038	6666	4229
Period Within Area	15/03 - 31/03	01/01 - 06/02	01/01 - 20/03
Mean Latitude	58.4	61.8	62.6
Mean Longitude	-35.3	-6.8	-14.9
No. of Obs Received	451	471	4000
% of obs with Acceptable Position	100.0	97.7	99.9
% of Present			
Pressure	91.8	97.7	94.5
P. Tendency	86.9	96.4	90.5
Air Temperature	91.4	98.5	93.8
Wind Speed/Dir	0.0/ 0.0	0.0/ 0.0	0.0/ 0.0
Sea-Surface Temp.	66.3	92.4	72.3
Median delay (min)	19.5	12.5	25
Number of days	17	37	79
Mean No. of obs/day	26.5	12.7	50.6
No. of Hours with obs	294	244	1558
Mean no. of hours/day with obs	17.3	6.6	19.7
% of hour periods without an ob	27.2	72.2	17.3
Mean (Ob-Bg)	-0.5	-0.9	-0.2
RMS (Ob-Bg) **unflagged data**	1.0	1.2	1.2
Mean (Ob-Bg)	-0.4	-0.5	0.3
RMS (Ob-Bg) **all data**	0.9	4.7	4.6
Revised RMS (Ob-Bg)	0.9	1.3	2.4
% of data flagged	43	58	68
Operating at end of period	YES	NO	NO
Performance			
Availability	Good	Poor	Very Good
Pressure Quality	Acceptable	Suspect	Acceptable
Timeliness	Very Good	Very Good	Very Good
Comments			

WMO No./Country	65602/IR		
Argos Id No.	6667		
Period Within Area	01/01 - 12/03		
Mean Latitude Mean Longitude	62.8 -1.0		
No. of Obs Received	4071		
% of obs with Acceptable Position	98.5		
% of Present Pressure P. Tendency Air Temperature Wind Speed/Dir Sea-Surface Temp.	 94.4 91.7 94.6 0.0/ 0.0 83.5		
Median delay (min)	21		
Number of days	71		
Mean No. of obs/day	57.3		
No. of Hours with obs	1398		
Mean no. of hours/day with obs	19.7		
% of hour periods without an ob	17.2		
Mean (Ob-Bg) RMS (Ob-Bg) **unflagged data**	-0.5 1.2		
Mean (Ob-Bg) RMS (Ob-Bg) **all data**	-0.5 2.2		
Revised RMS (Ob-Bg)	1.3		
% of data flagged	72		
Operating at end of period	NO		
Performance Availability Pressure Quality Timeliness	 Very Good Acceptable Very Good		
Comments			

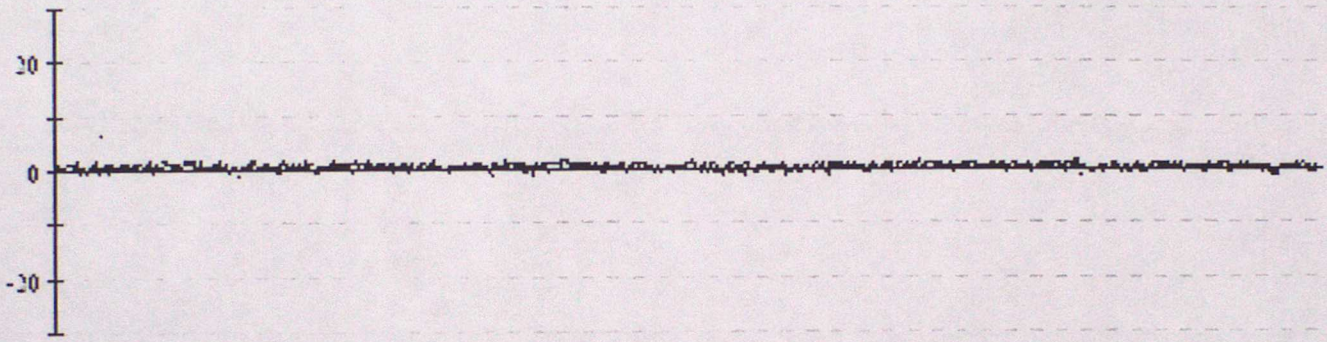
ANNEX B - TIME SERIES PLOTS OF PRESSURE

Data from 00z on 01/01/2002 to 23z on 31/03/2002 (OBS - Background field)

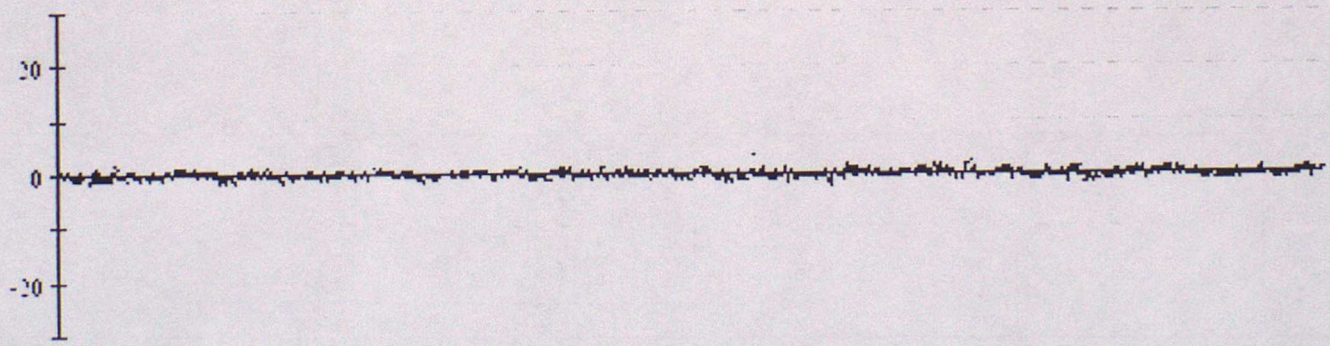
41523 Pressure



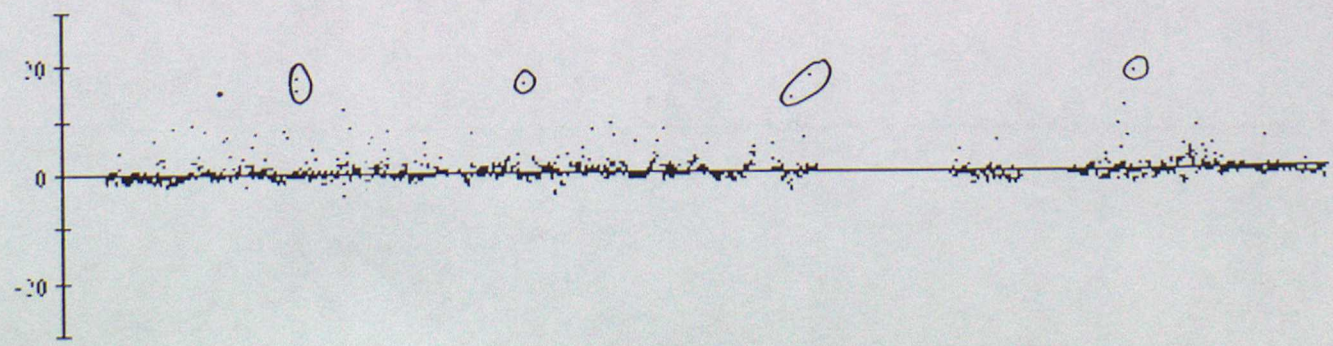
41650 Pressure



41652 Pressure

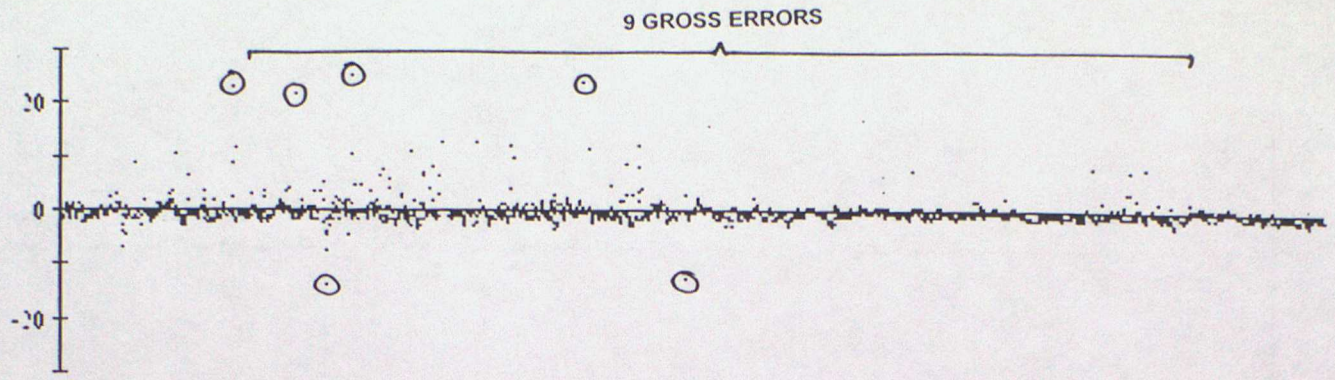


41657 Pressure

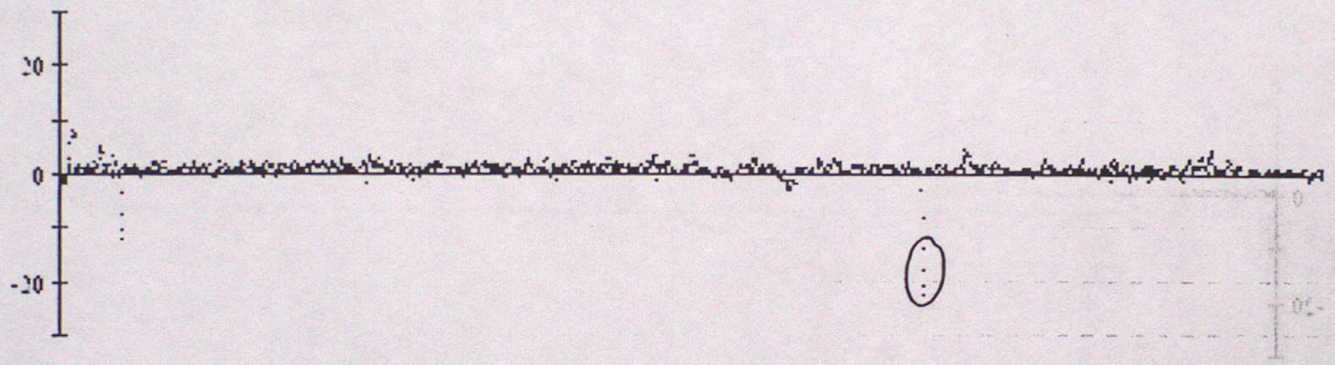


Data from 00z on 01/01/2002 to 23z on 31/03/2002 (OBS - Background field)

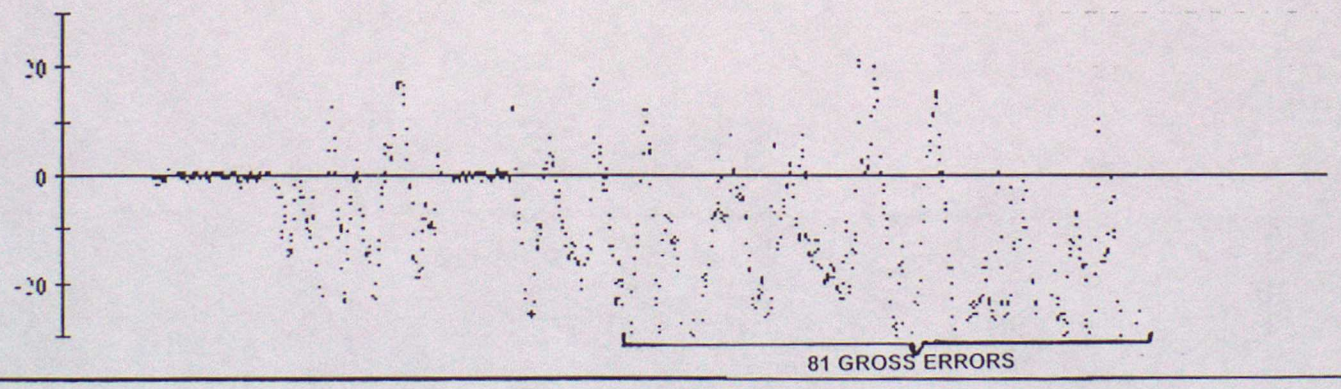
41658 Pressure



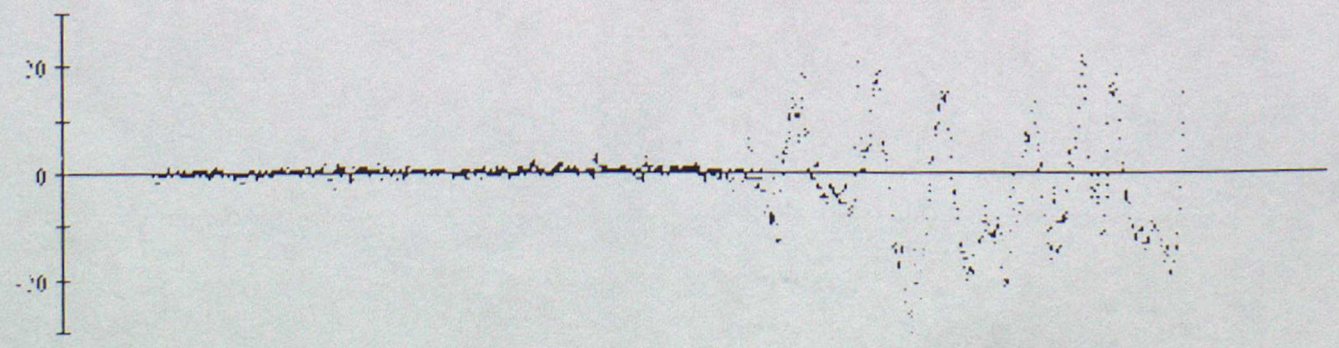
41659 Pressure



44513 Pressure

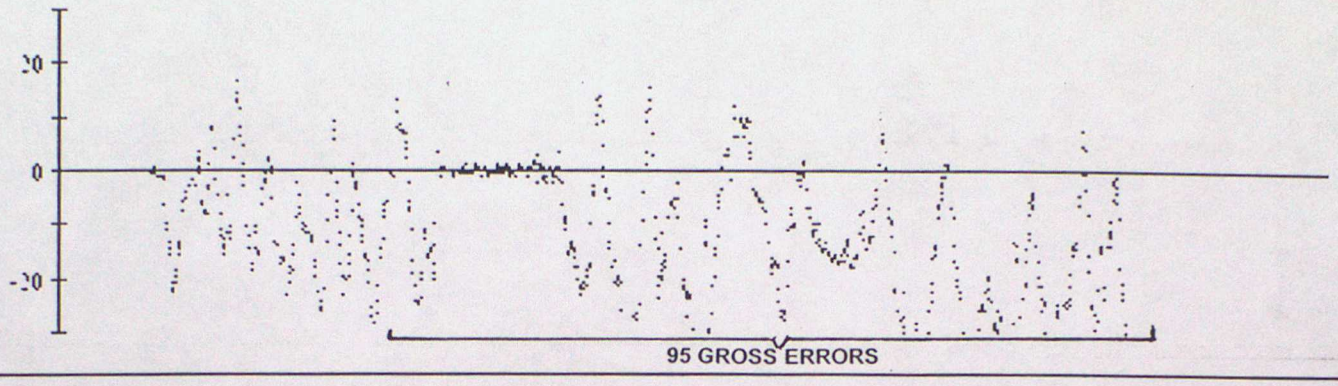


44514 Pressure

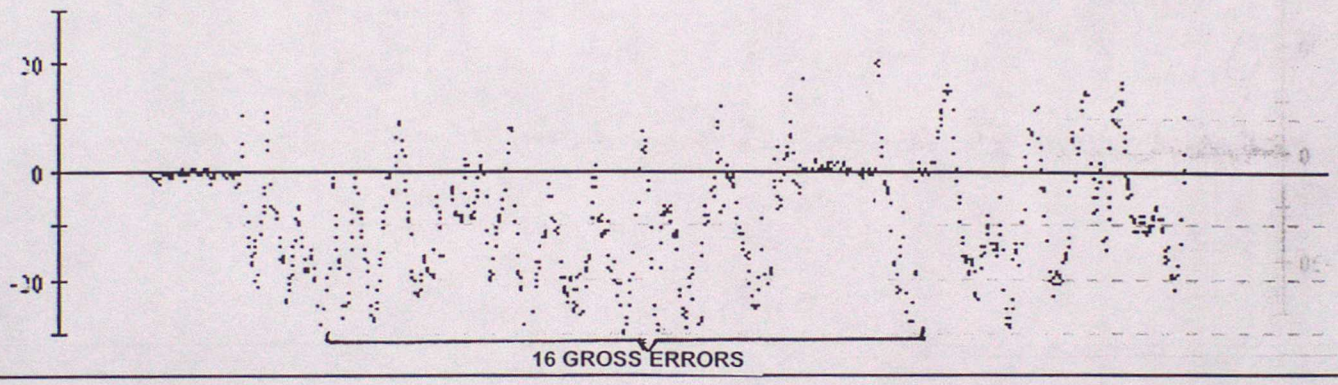


Data from 00z on 01/01/2002 to 23z on 31/03/2002 (OBS - Background field)

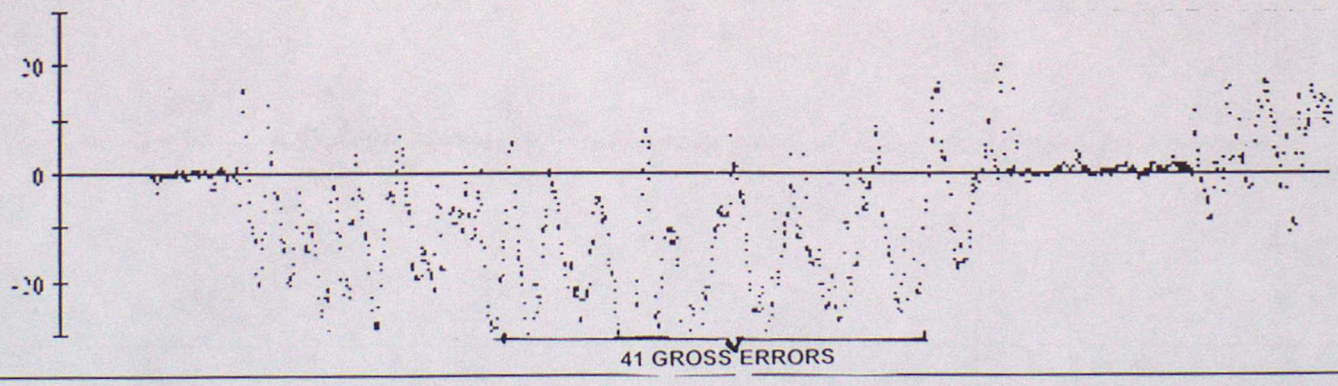
44515 Pressure



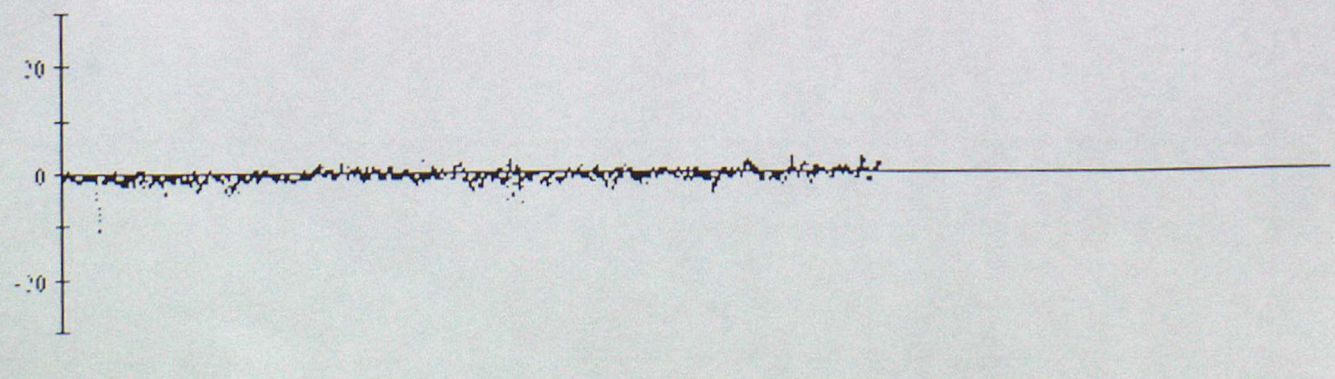
44516 Pressure



44517 Pressure

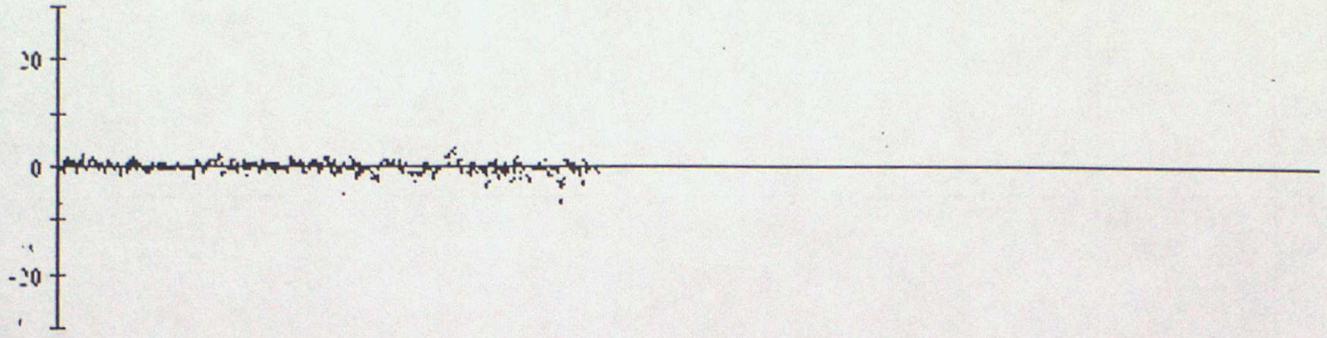


44546 Pressure

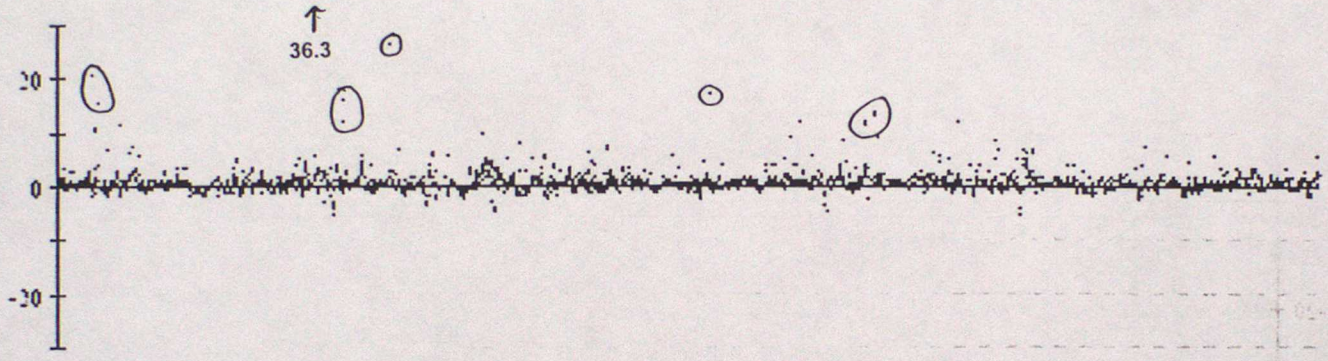


Data from 00z on 01/01/2002 to 23z on 31/03/2002 (OBS - Background field)

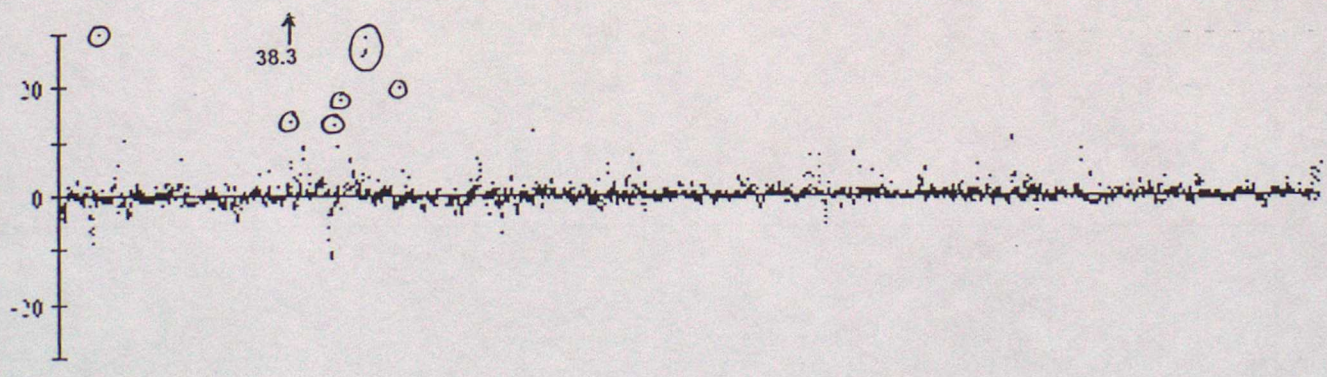
44548 Pressure



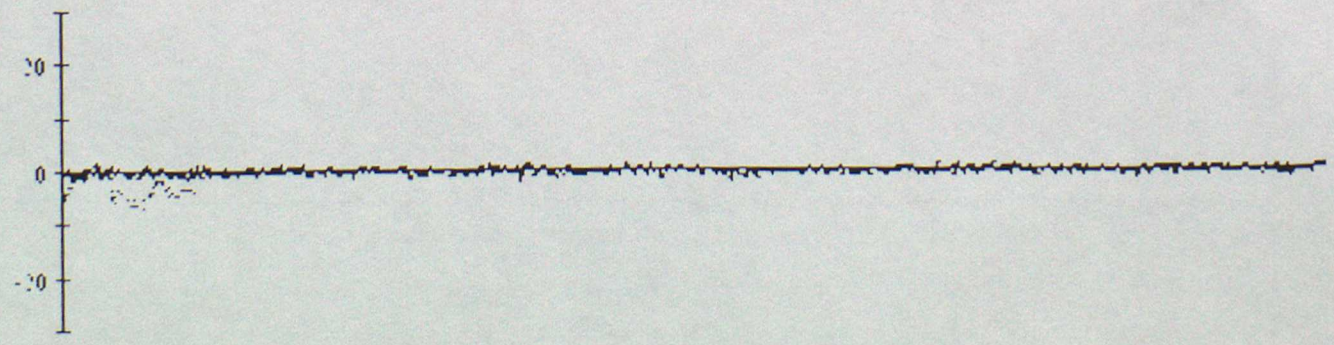
44549 Pressure



44550 Pressure

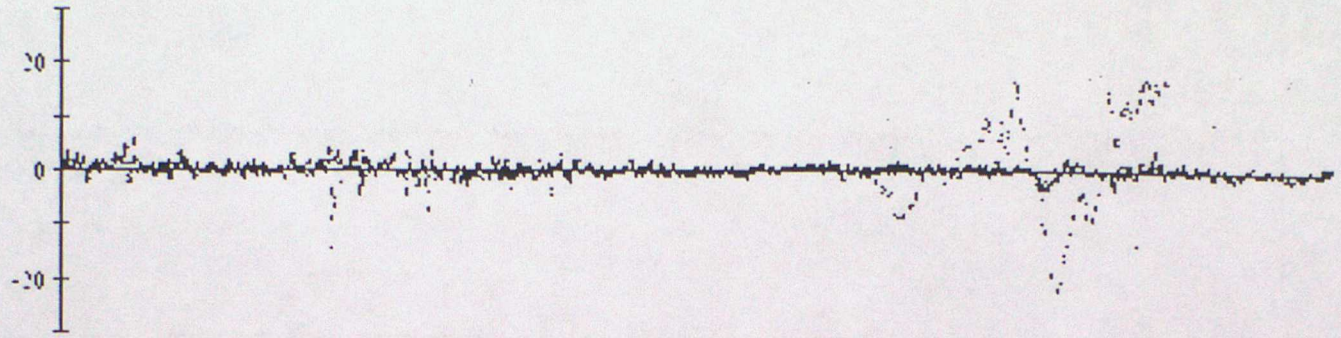


44612 Pressure

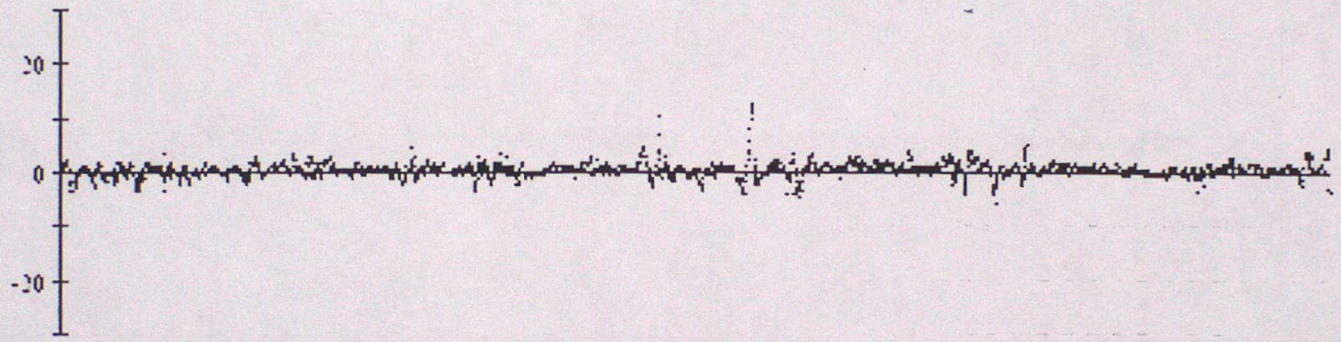


Data from 00z on 01/01/2002 to 23z on 31/03/2002 (OBS - Background field)

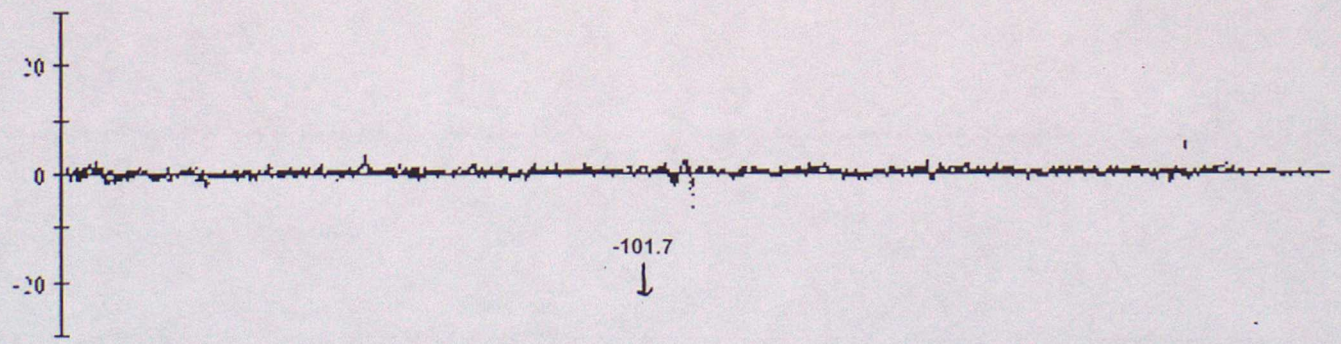
44616 Pressure



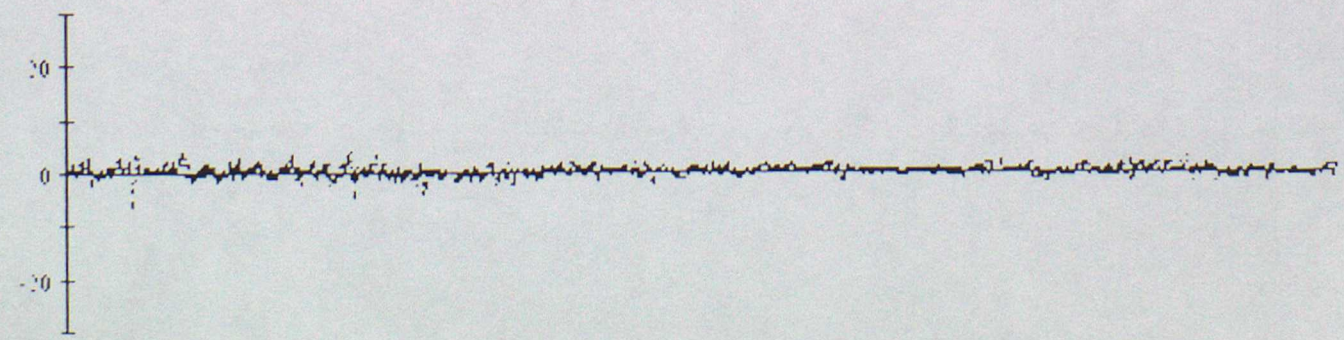
44621 Pressure



44623 Pressure

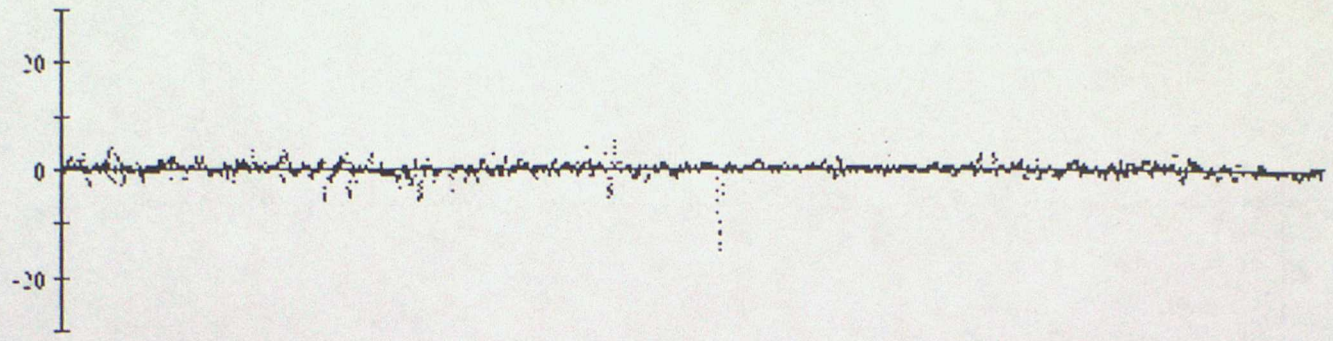


44624 Pressure

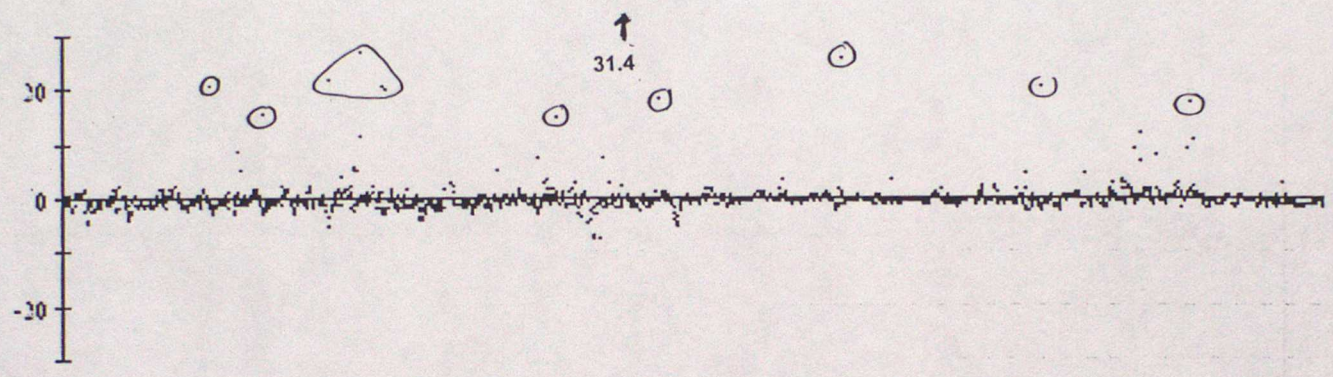


Data from 00z on 01/01/2002 to 23z on 31/03/2002 (OBS - Background field)

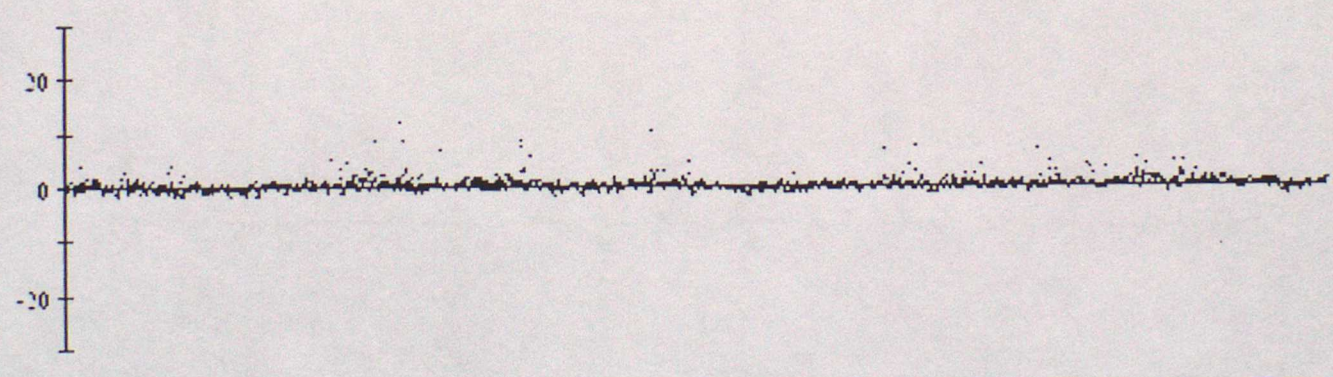
44625 Pressure



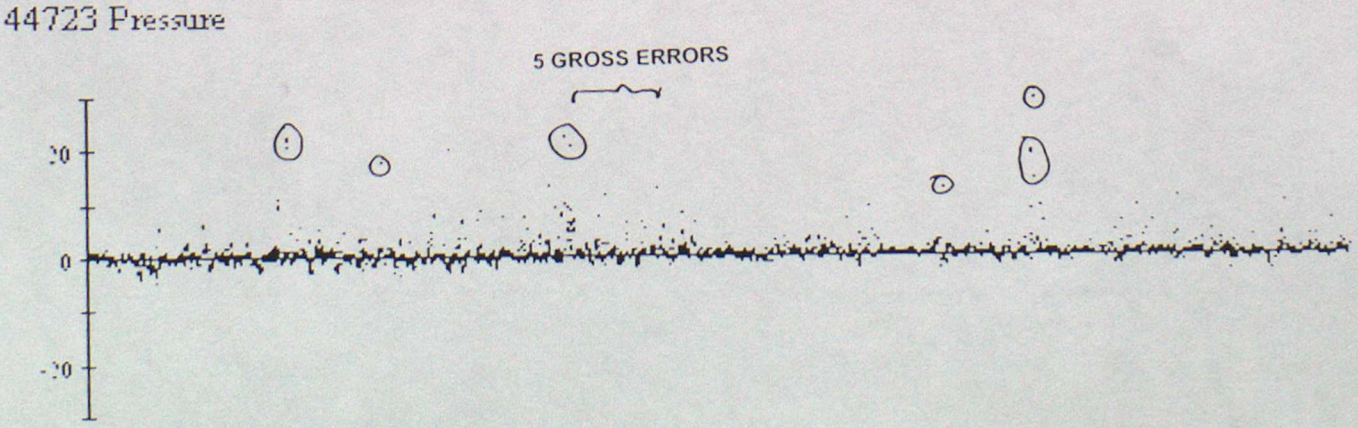
44627 Pressure



44721 Pressure

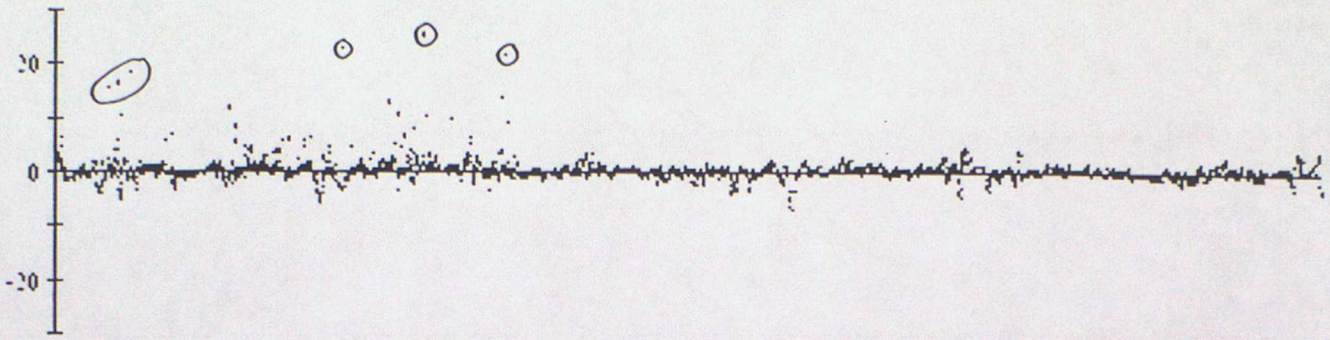


44723 Pressure

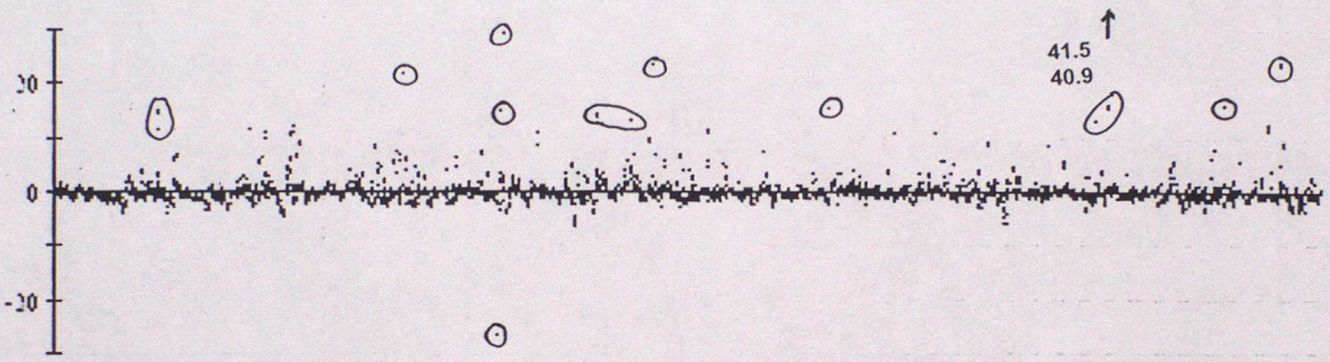


Data from 00z on 01/01/2002 to 23z on 31/03/2002 (OBS - Background field)

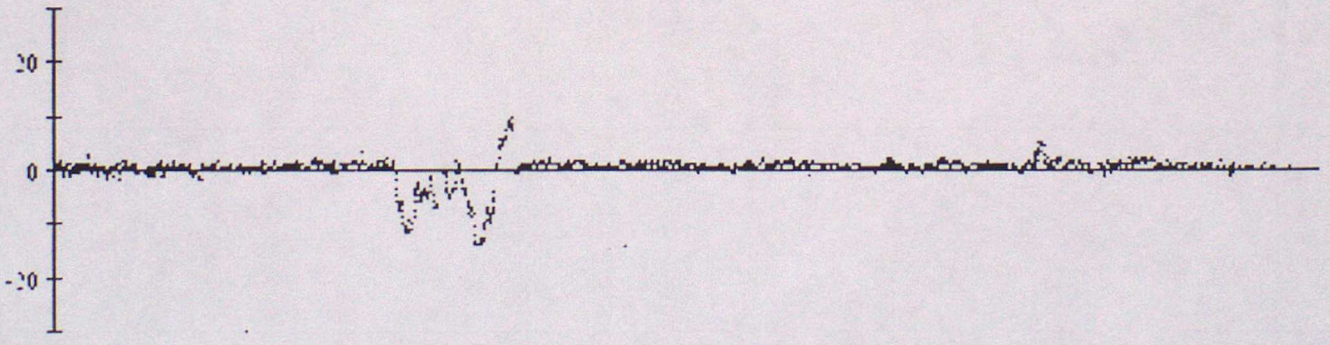
44726 Pressure



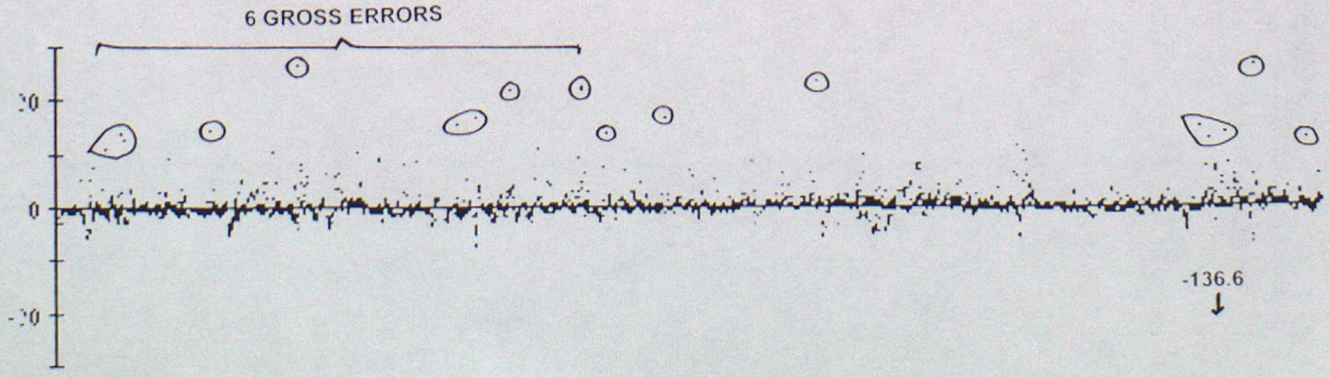
44728 Pressure



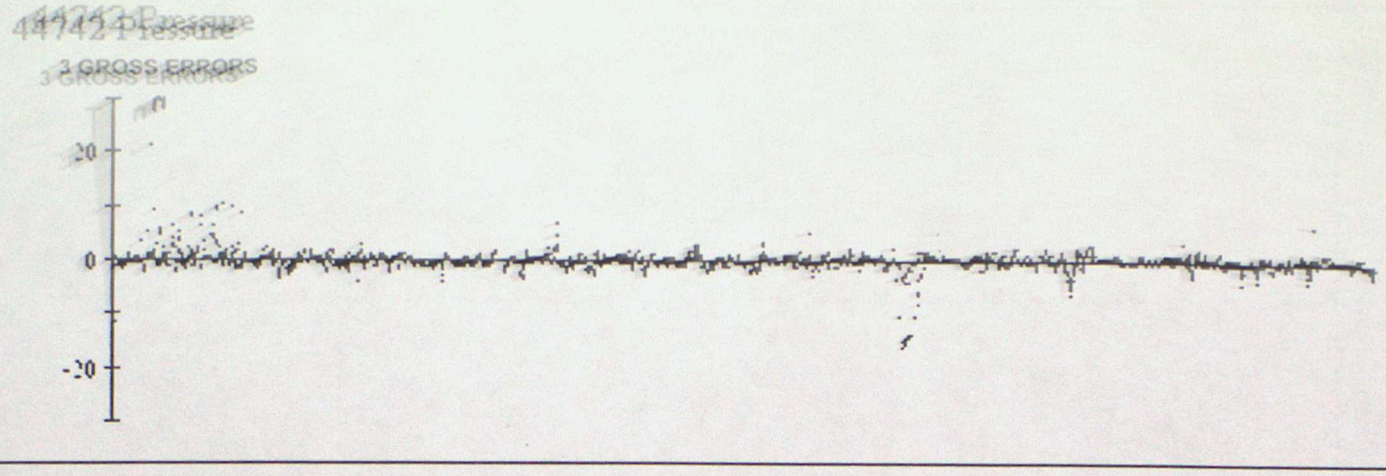
44729 Pressure

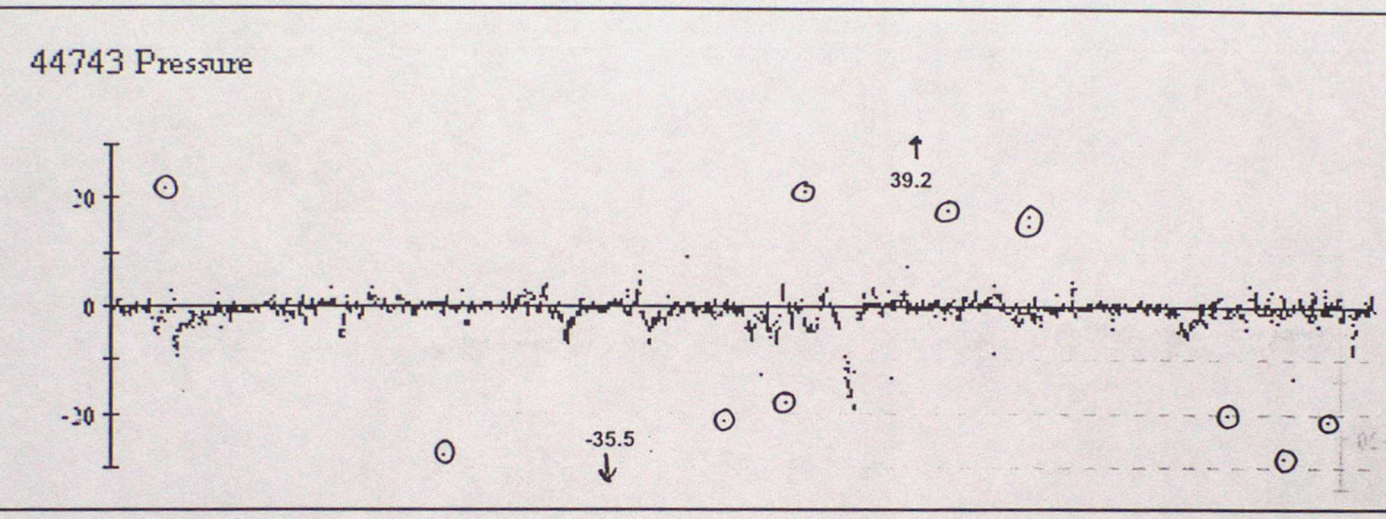


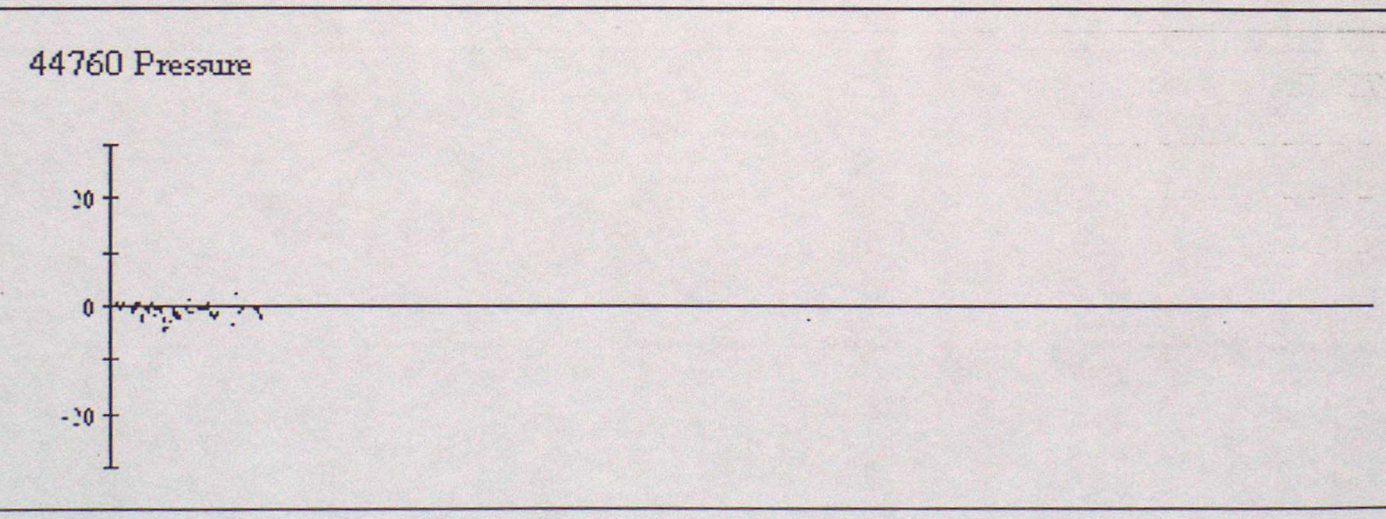
44730 Pressure

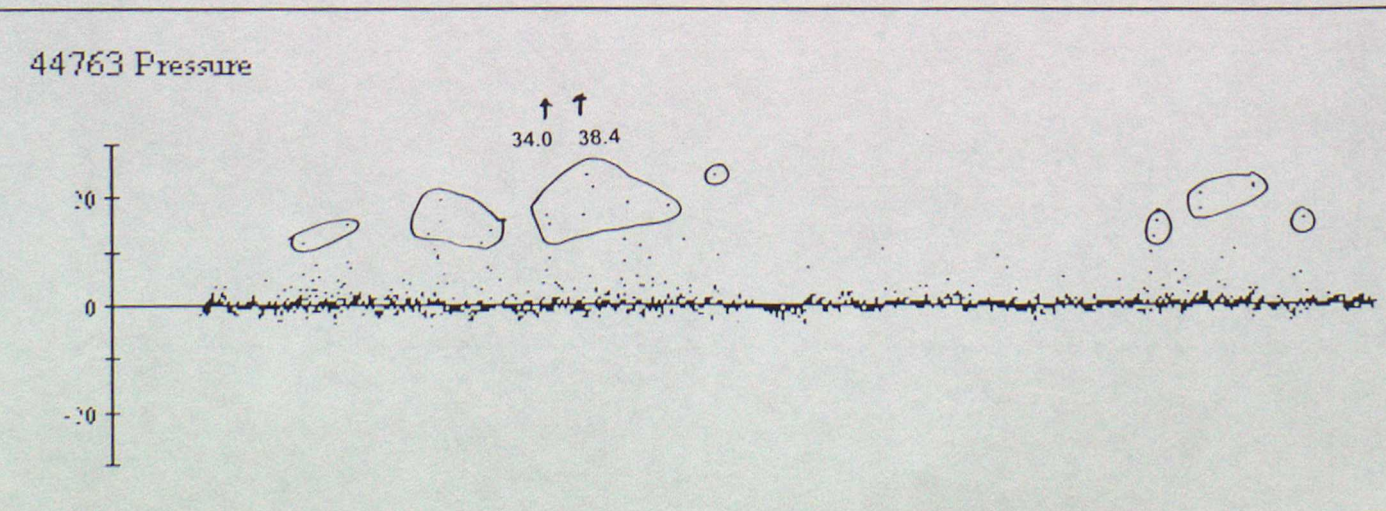


Data from 00z on 01/01/2002 to 23z on 31/03/2002 (OBS - Background field)



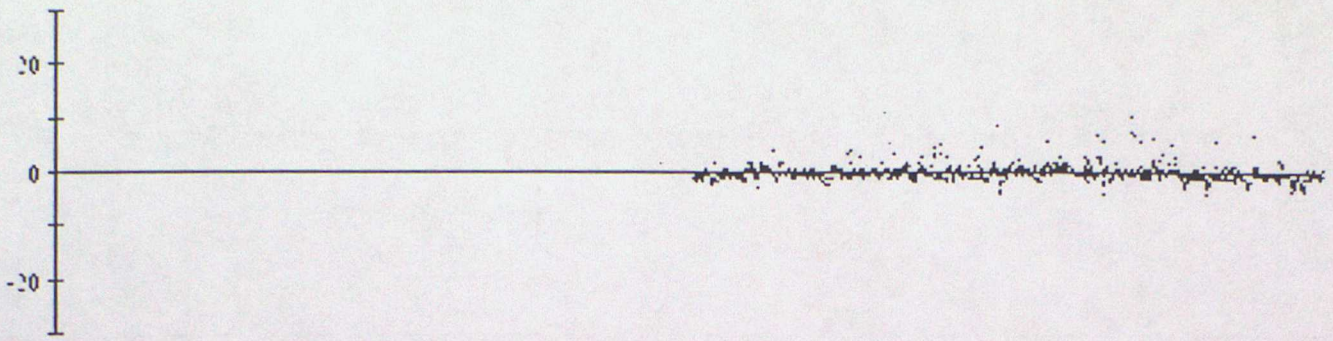




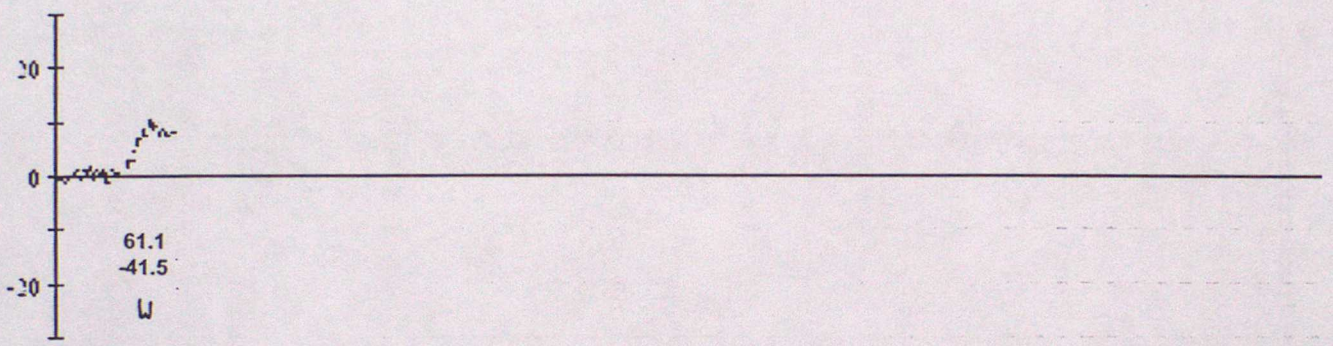


Data from 00z on 01/01/2002 to 23z on 31/03/2002 (OBS - Background field)

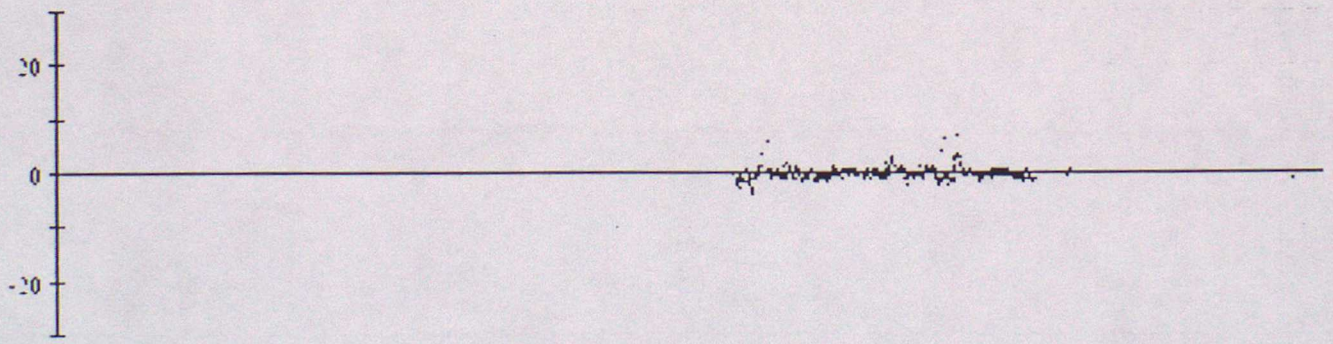
44764 Pressure



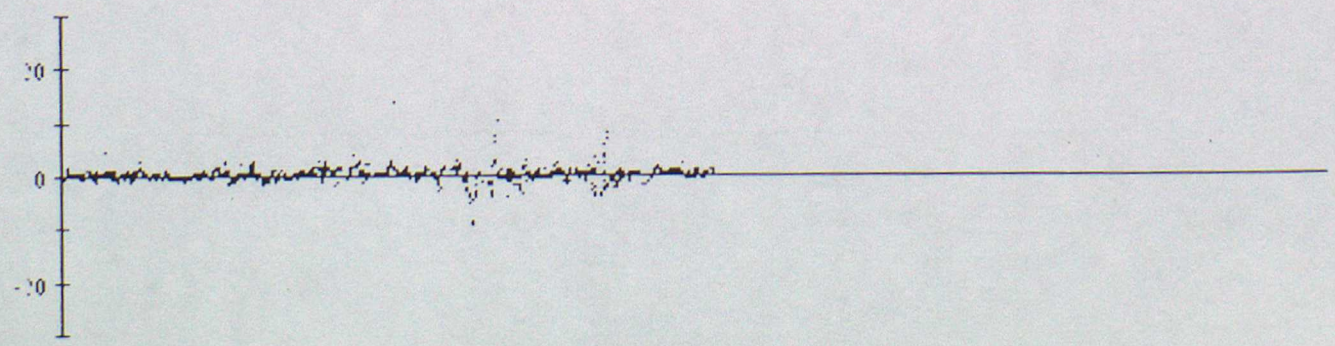
44765 Pressure



44766 Pressure

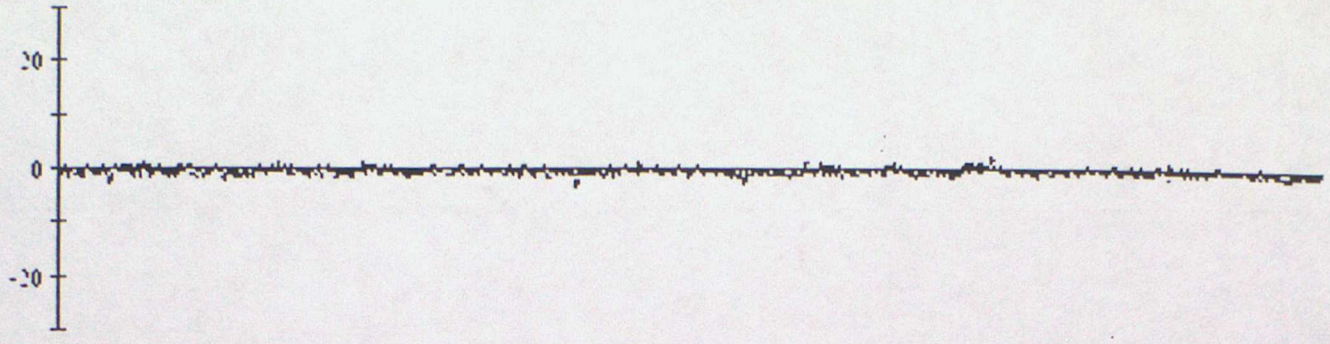


44771 Pressure

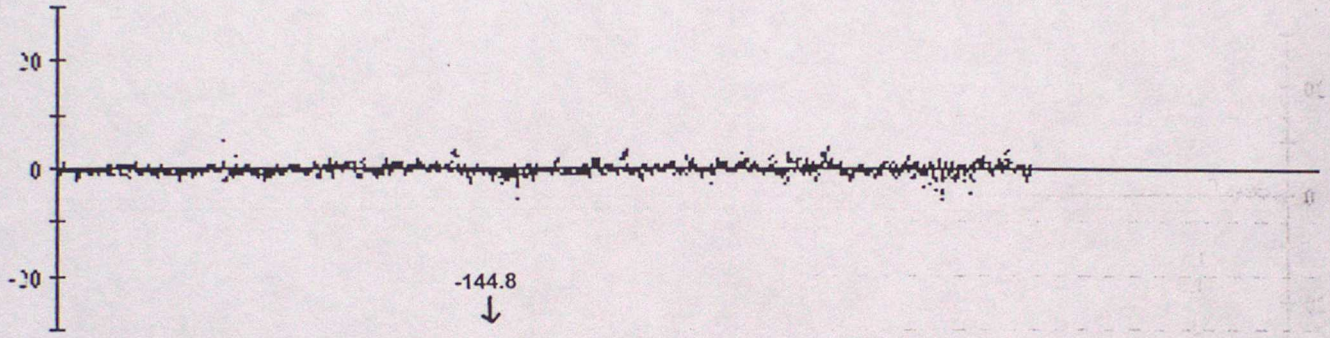


Data from 00z on 01/01/2002 to 23z on 31/03/2002 (OBS - Background field)

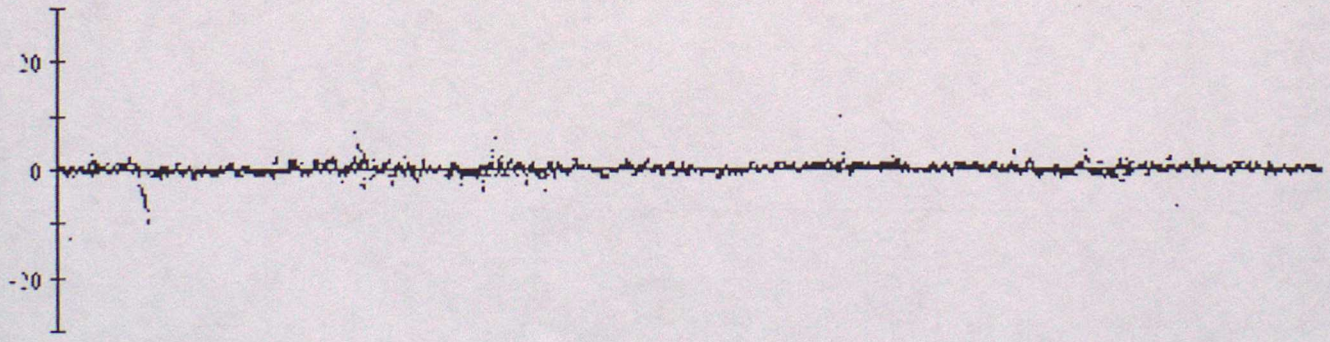
44775 Pressure



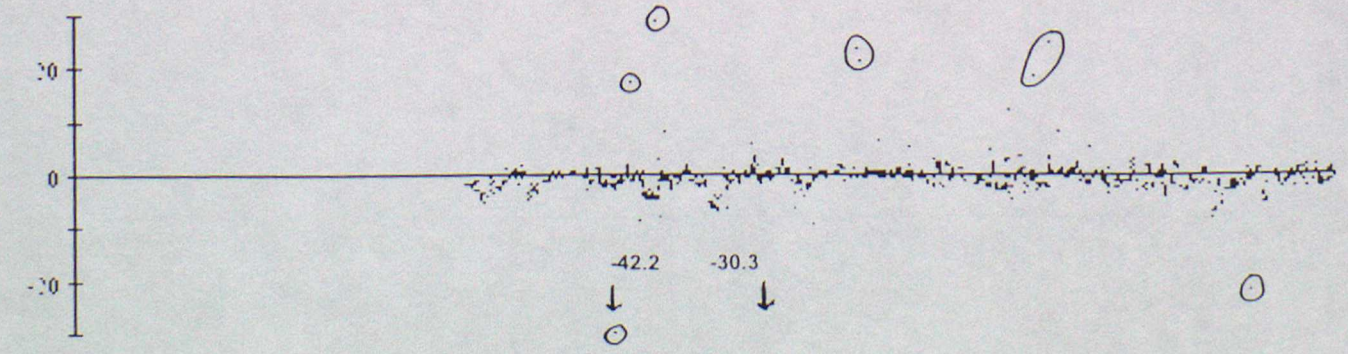
44776 Pressure



44778 Pressure

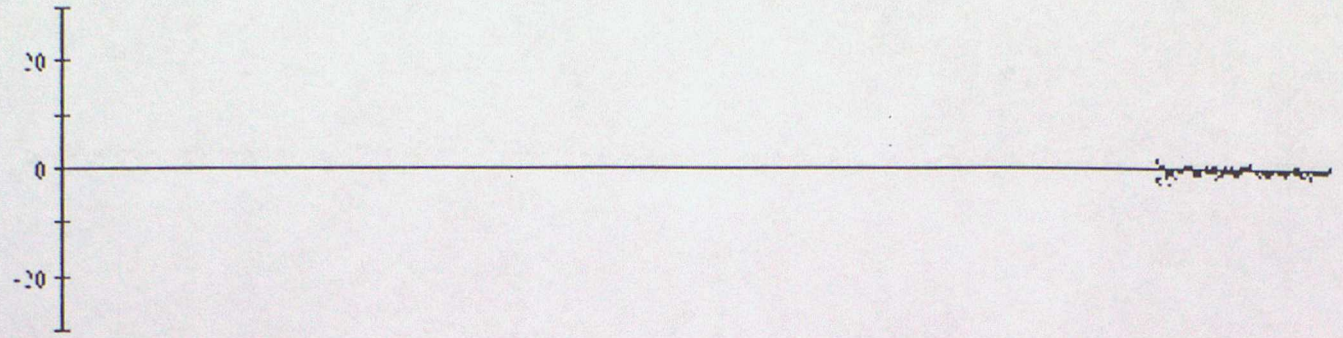


44779 Pressure

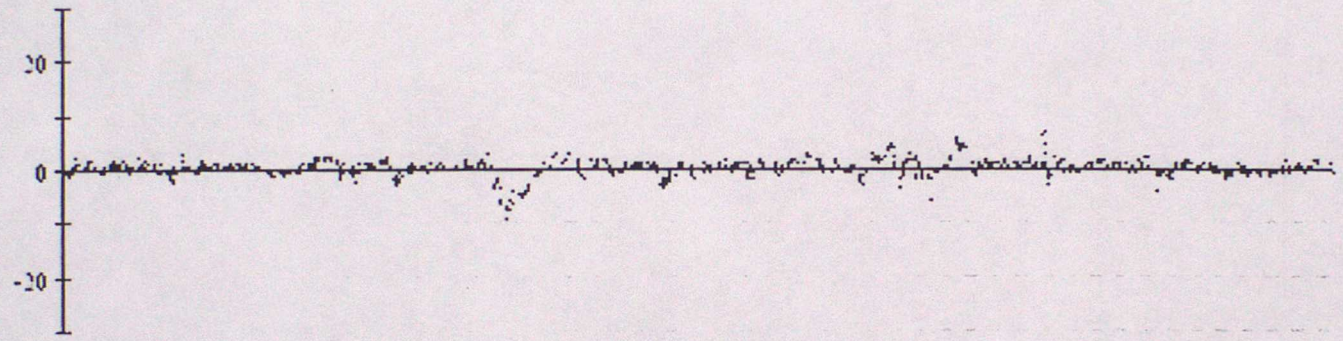


Data from 00z on 01/01/2002 to 23z on 31/03/2002 (OBS - Background field)

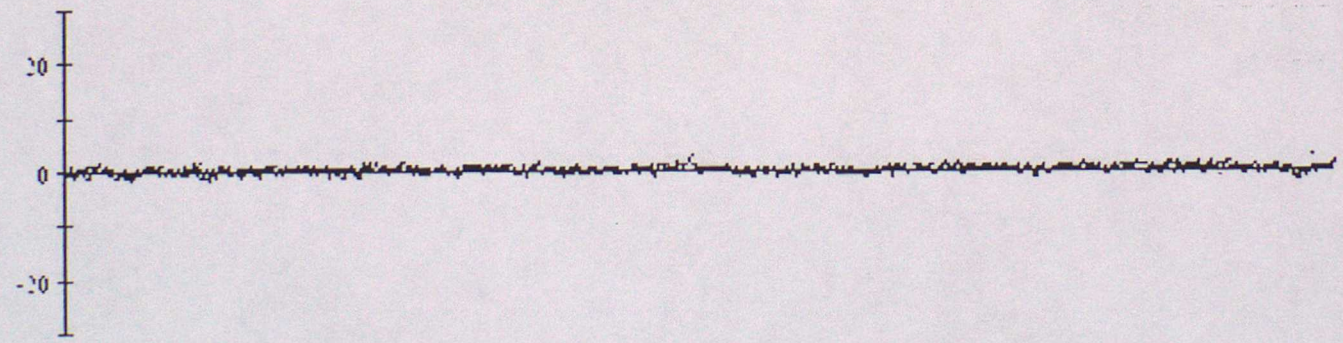
44780 Pressure



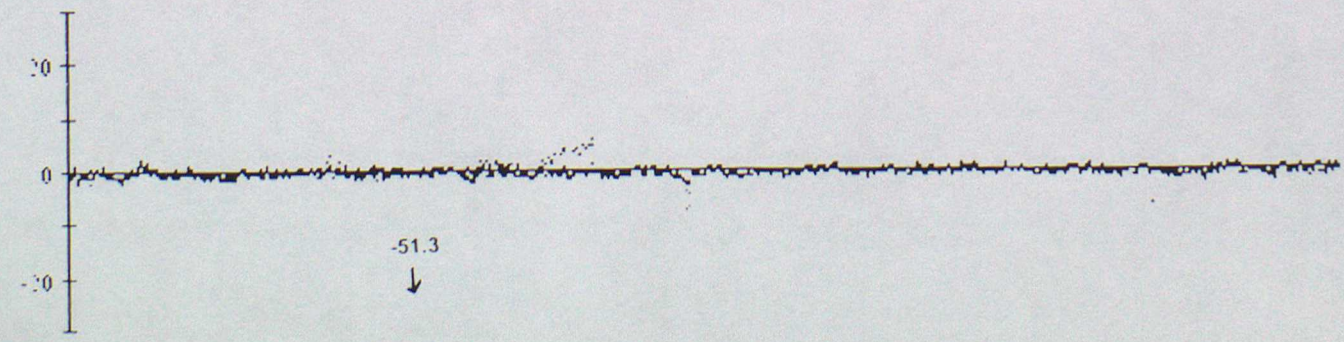
47556 Pressure



62501 Pressure

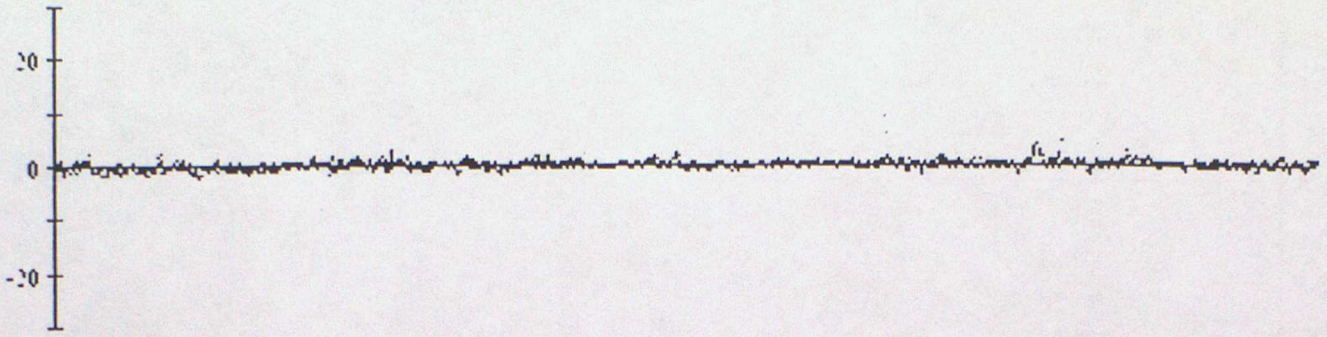


62503 Pressure

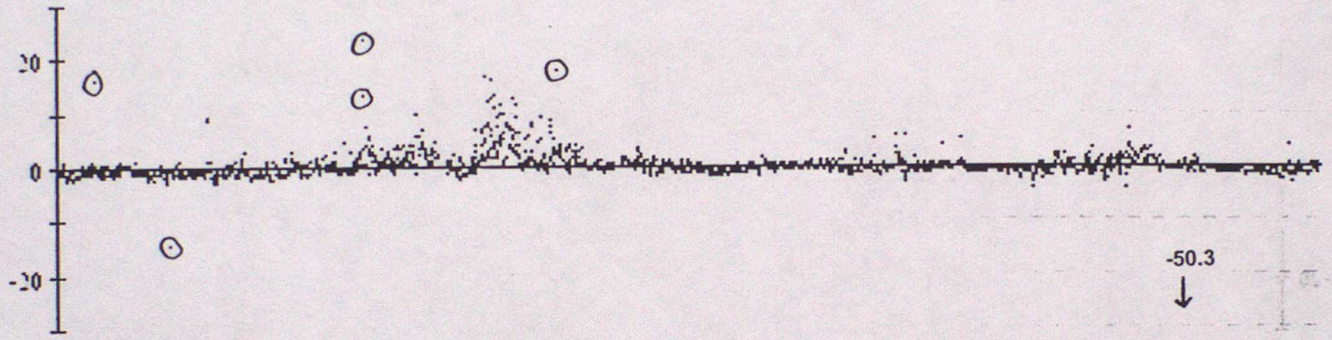


Data from 00z on 01/01/2002 to 23z on 31/03/2002 (OBS - Background field)

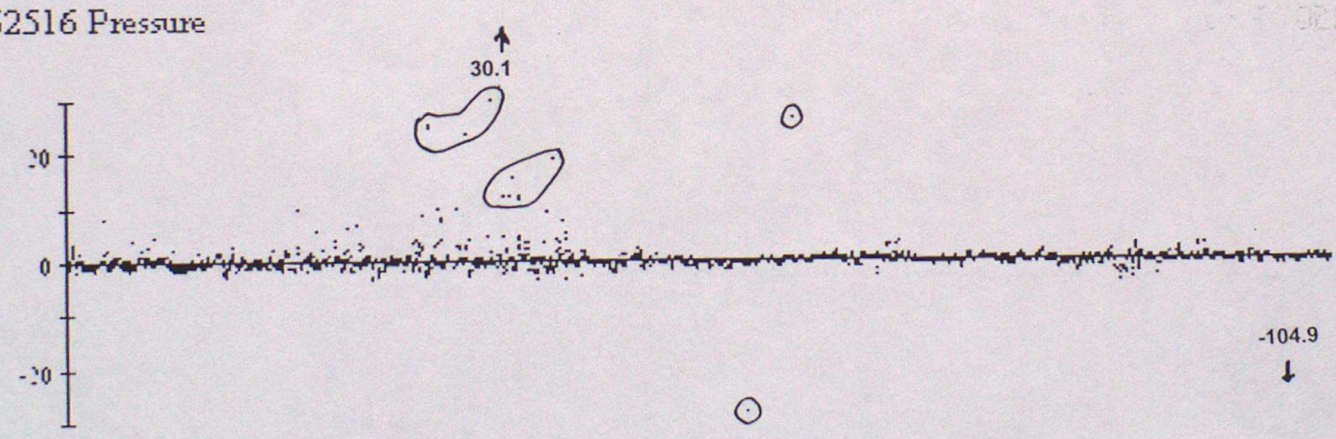
62504 Pressure



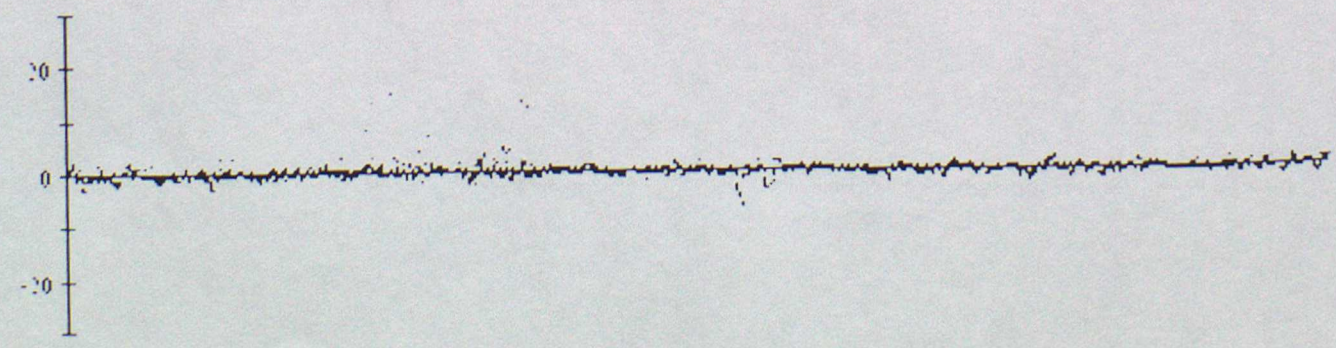
62512 Pressure



62516 Pressure

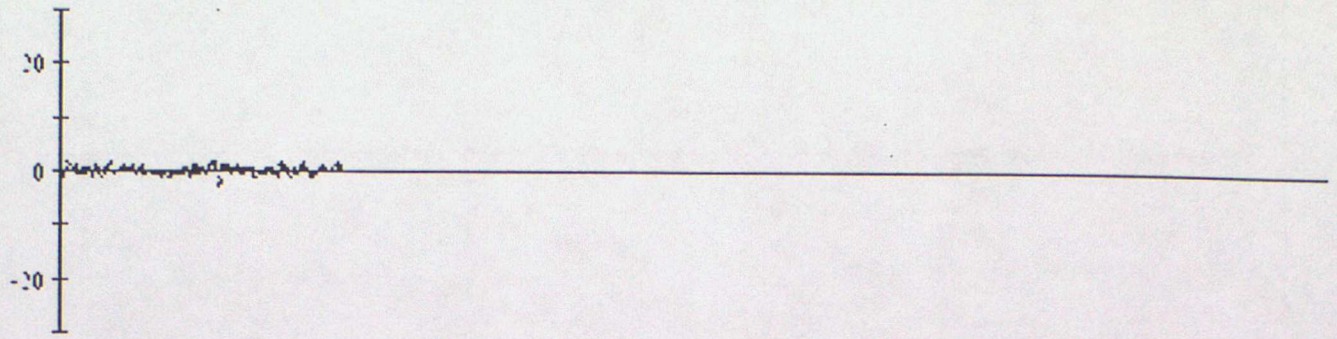


62518 Pressure

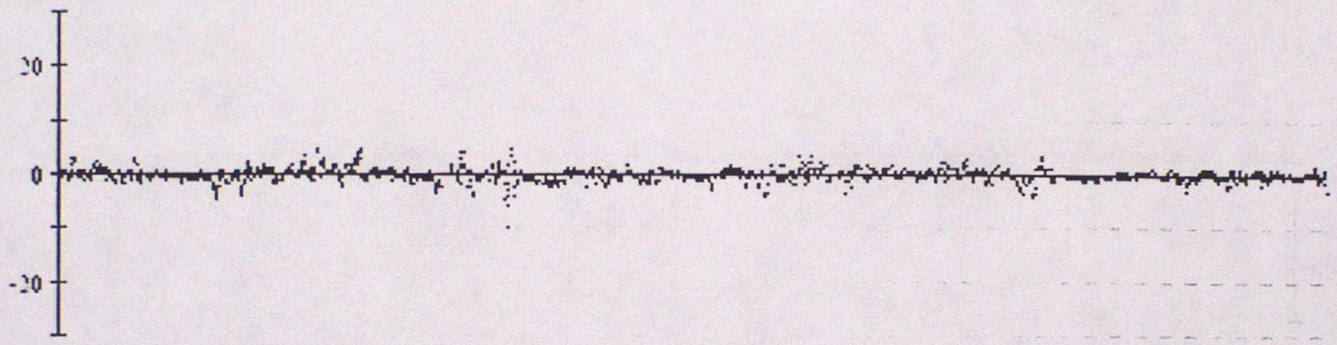


Data from 00z on 01/01/2002 to 23z on 31/03/2002 (OBS - Background field)

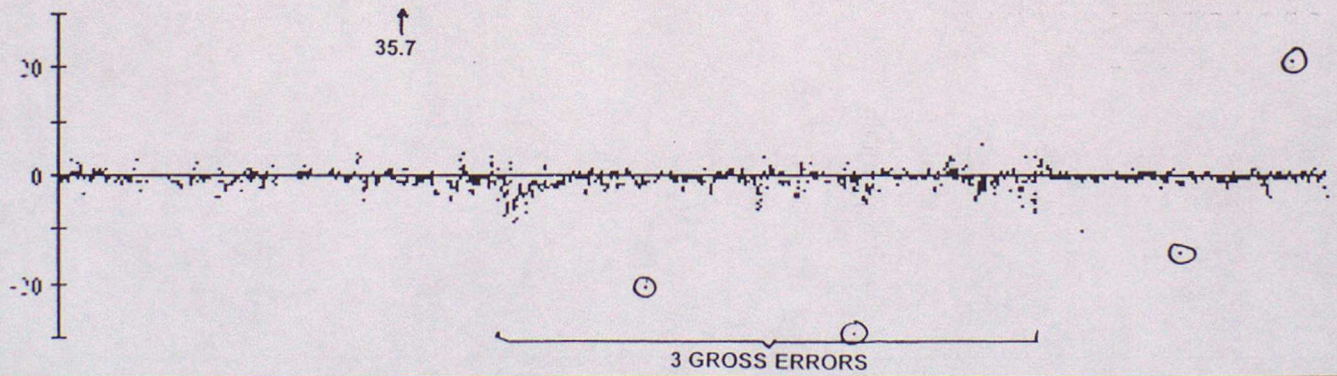
62519 Pressure



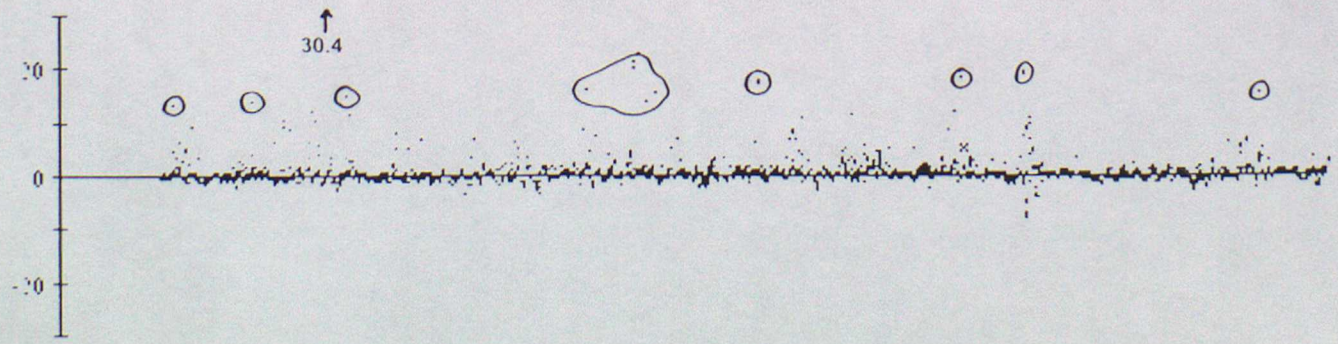
62520 Pressure



62598 Pressure

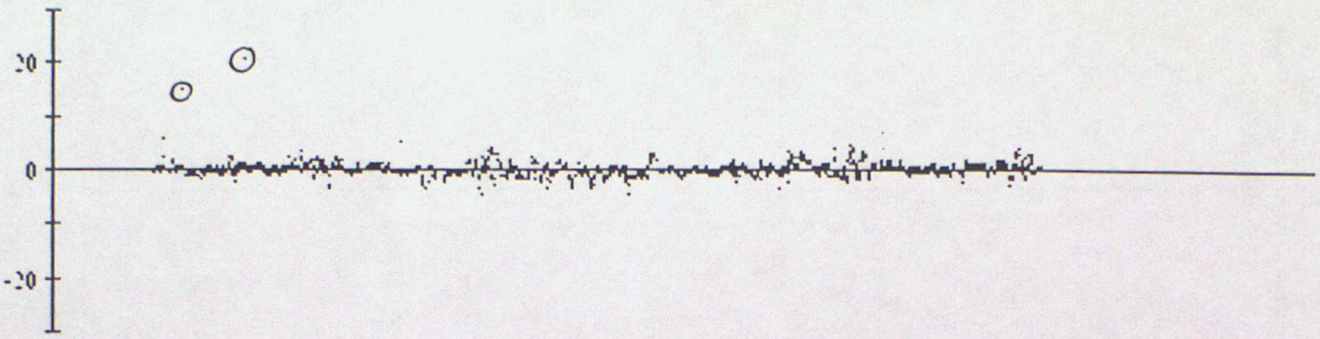


62694 Pressure

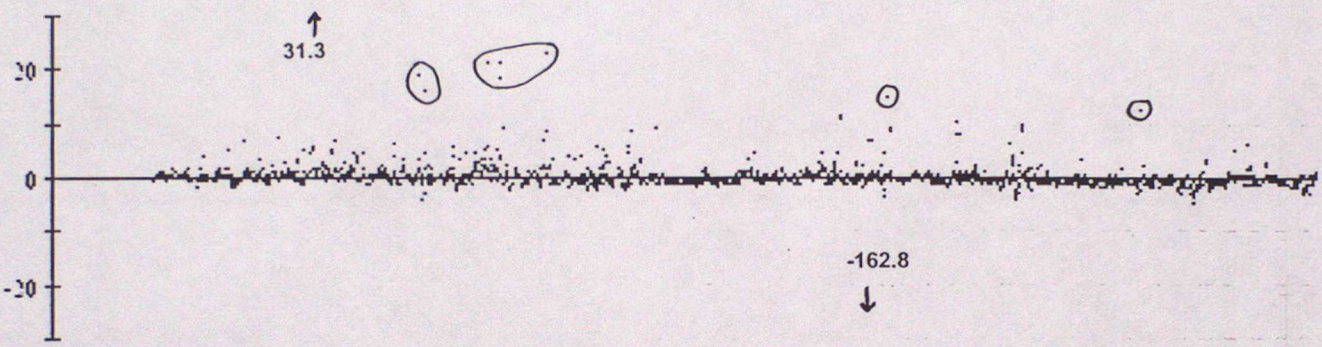


Data from 00z on 01/01/2002 to 23z on 31/03/2002 (OBS - Background field)

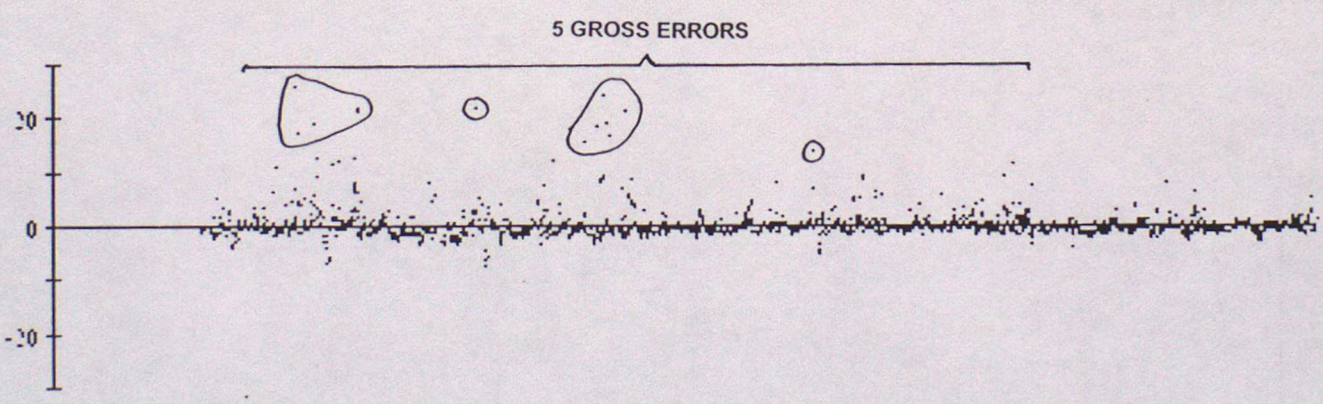
62695 Pressure



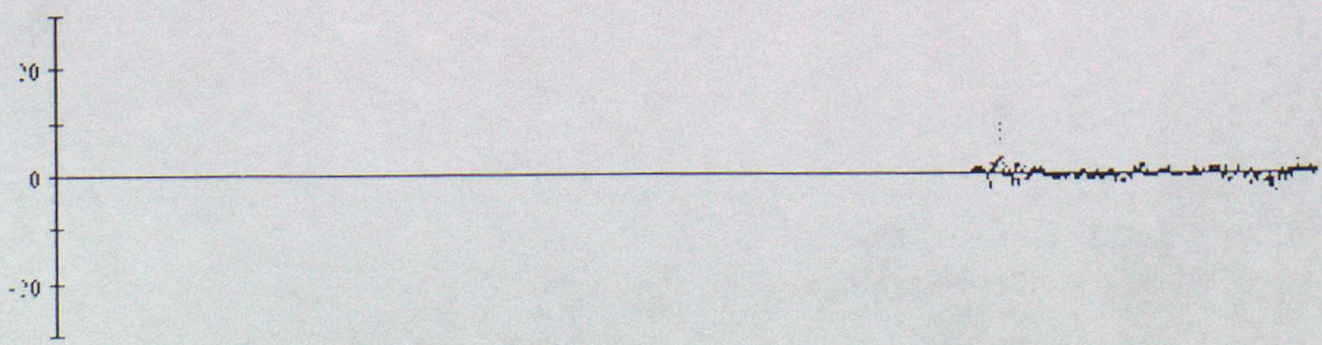
62696 Pressure



62697 Pressure

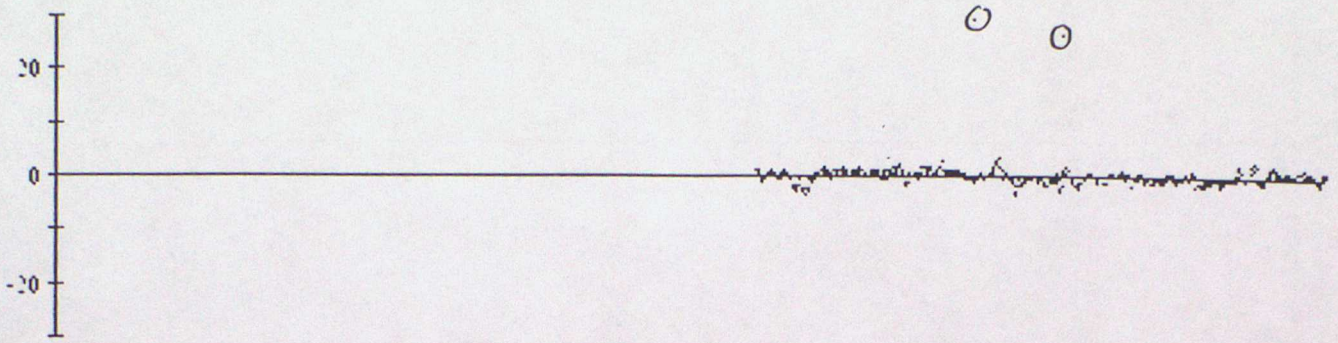


63536 Pressure

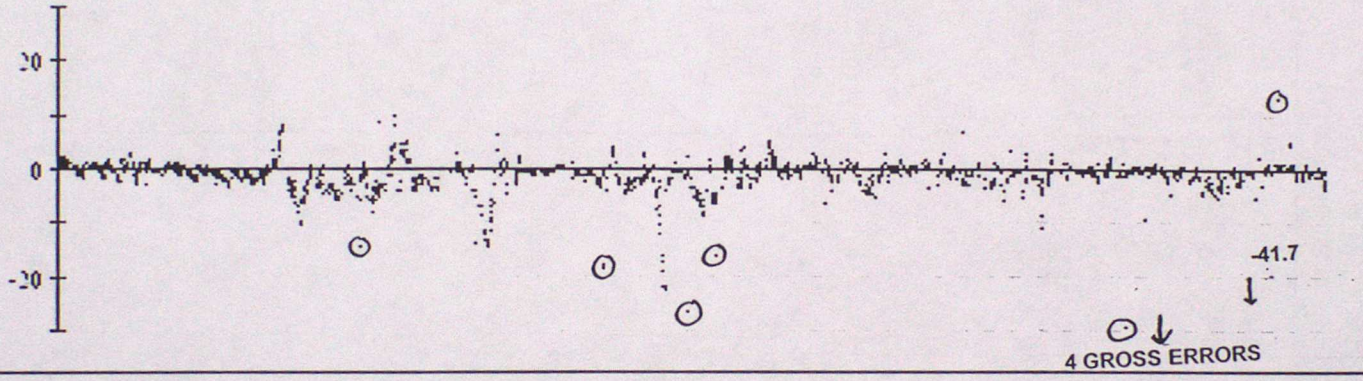


Data from 00z on 01/01/2002 to 23z on 31/03/2002 (OBS - Background field)

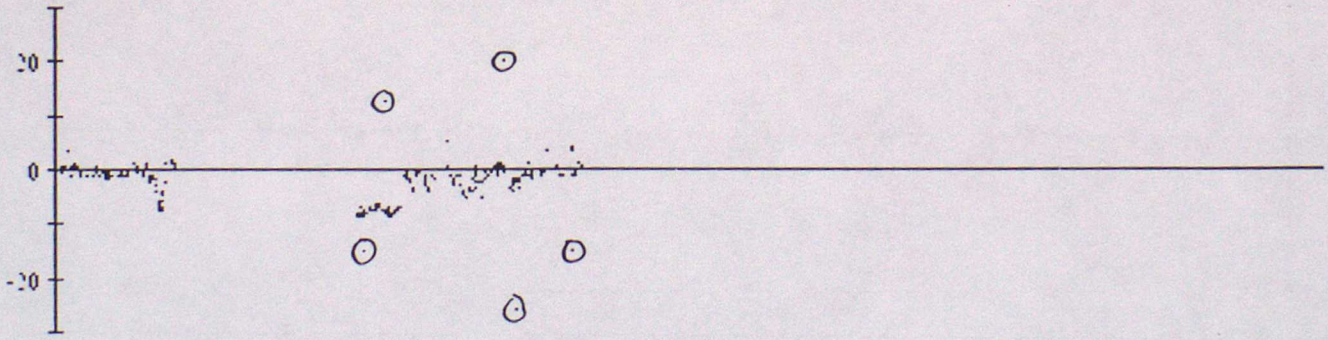
63663 Pressure



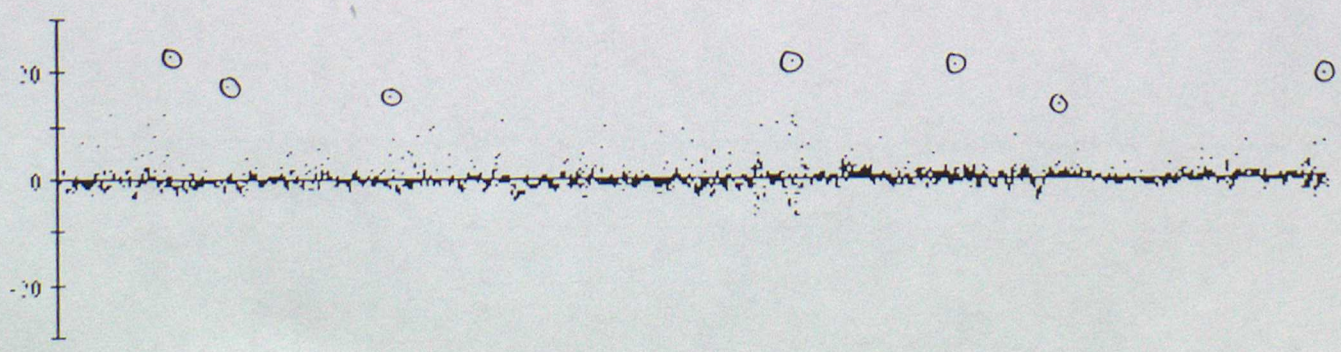
64549 Pressure



64551 Pressure

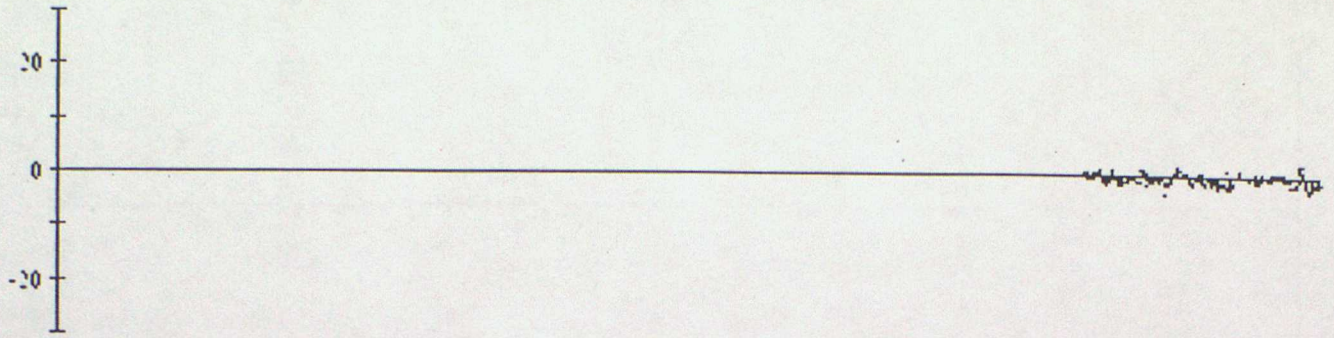


64552 Pressure

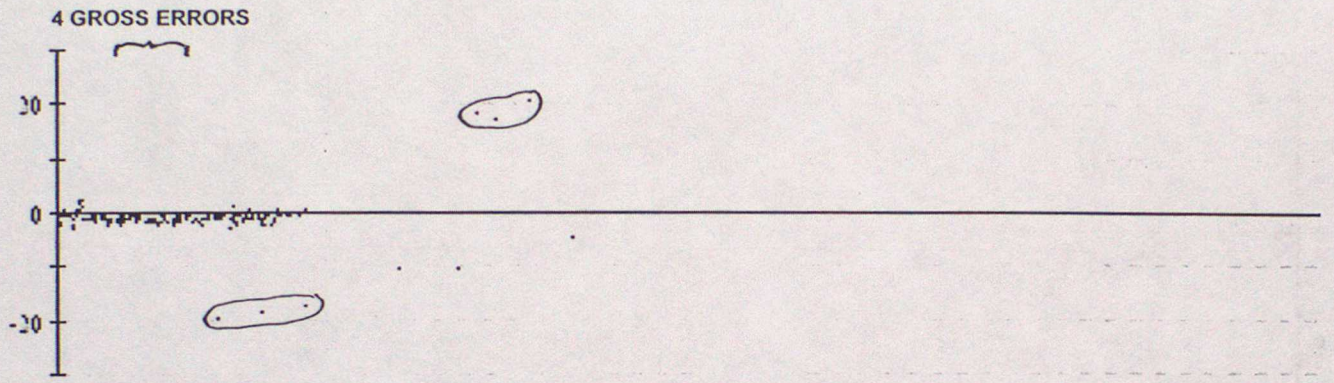


Data from 00z on 01/01/2002 to 23z on 31/03/2002 (OBS - Background field)

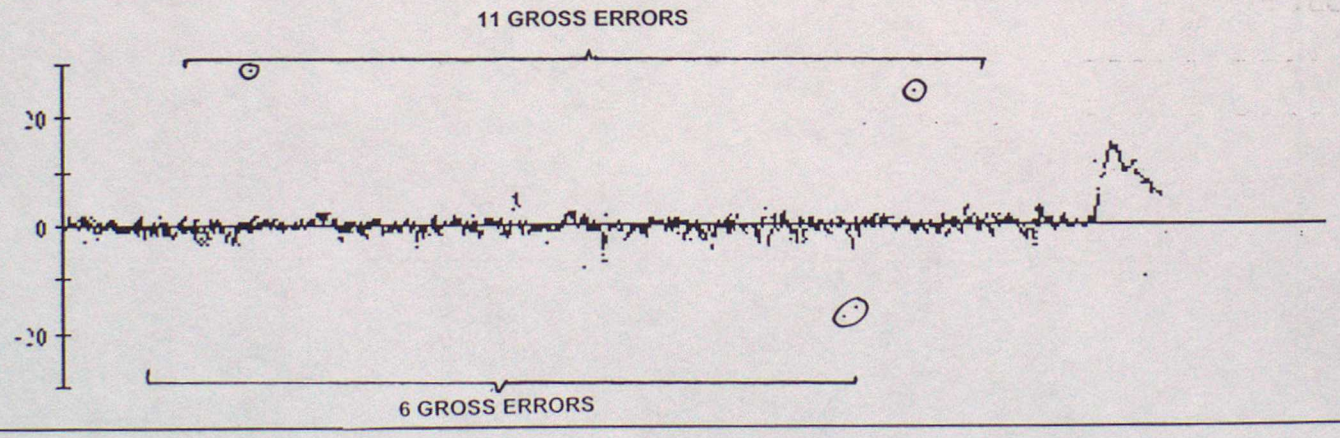
64553 Pressure



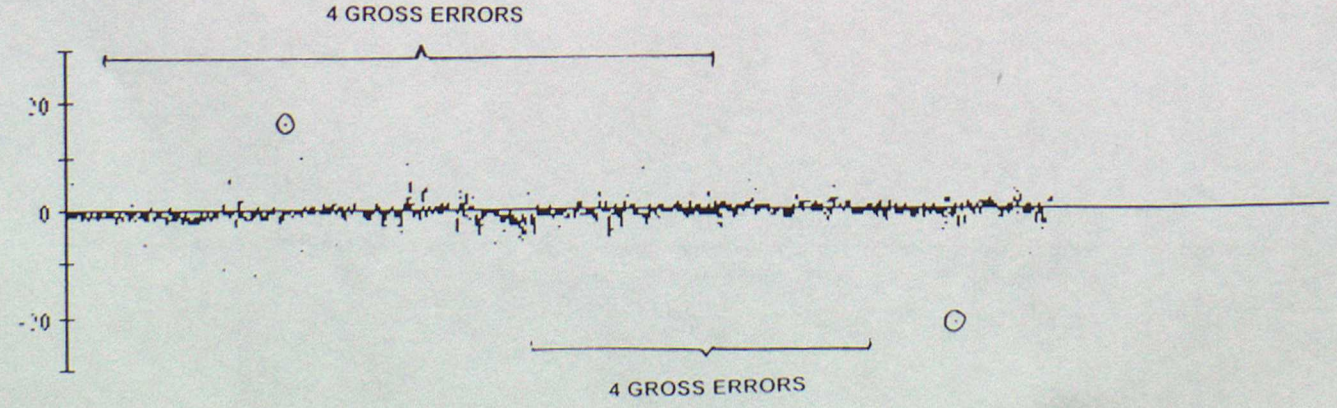
65581 Pressure



65595 Pressure



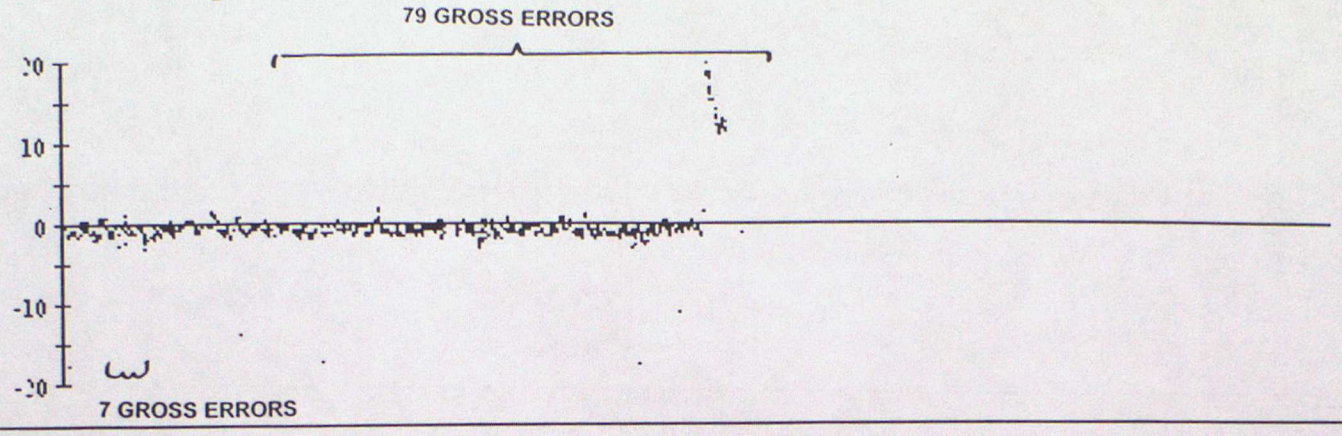
65602 Pressure



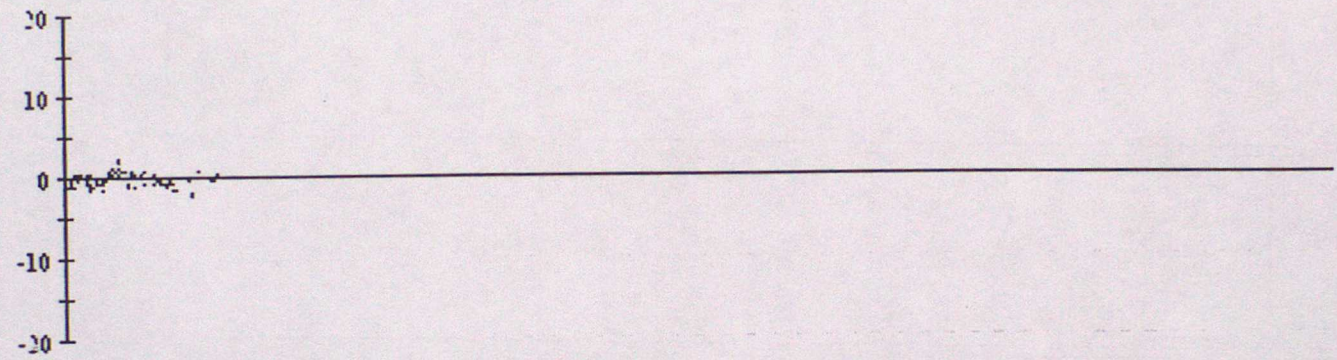
ANNEX C - TIME SERIES PLOTS OF AIR TEMPERATURE

Data from 00z on 01/01/2002 to 23z on 31/03/2002 (OBS - Background field)

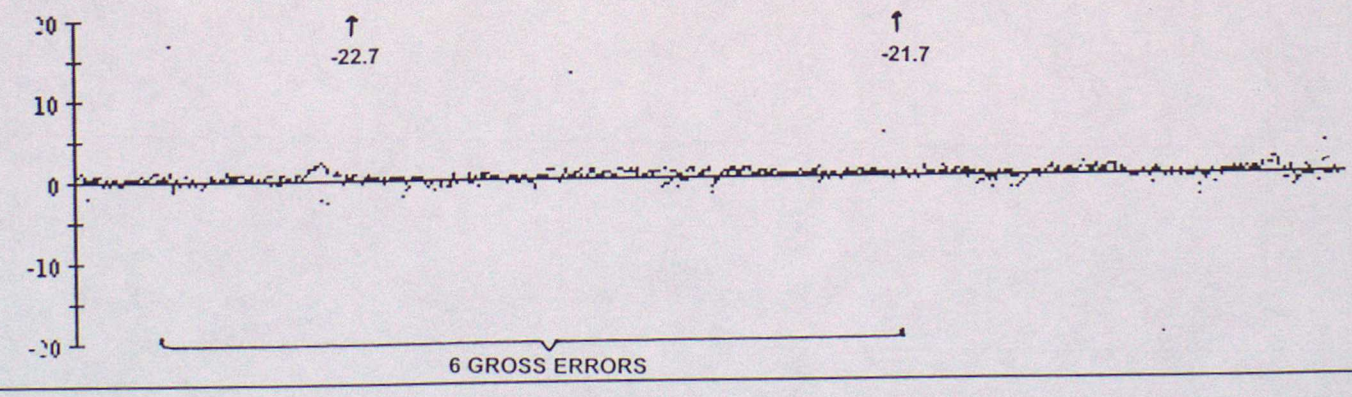
44743 Air Temperature



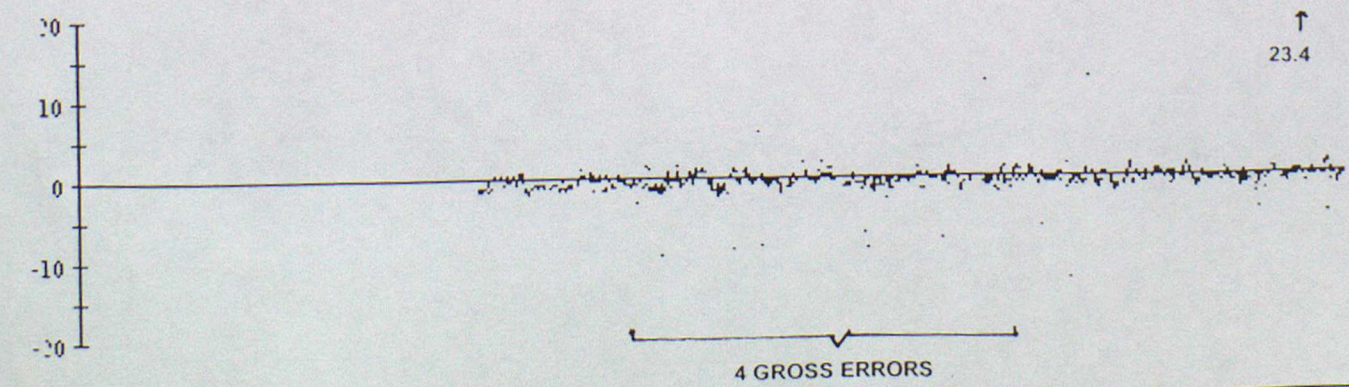
44760 Air Temperature



44765 Air Temperature

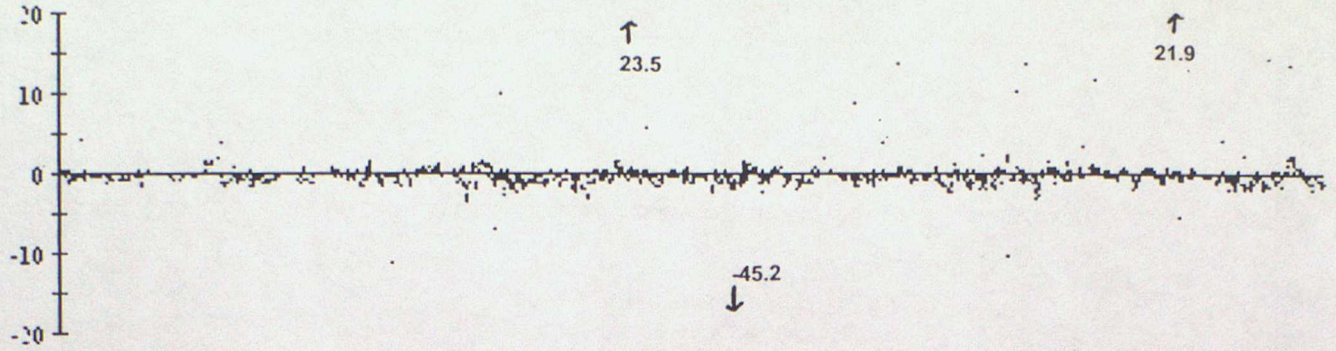


44779 Air Temperature

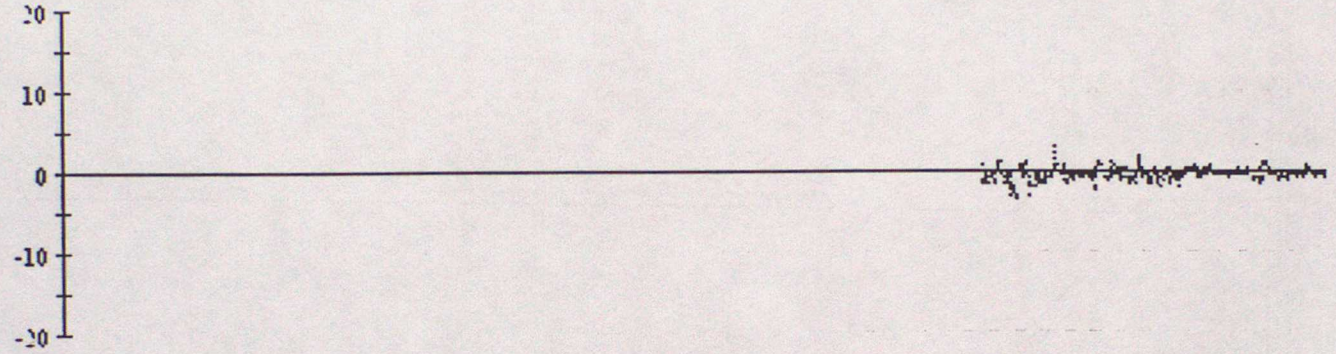


Data from 00z on 01/01/2002 to 23z on 31/03/2002 (OBS - Background field)

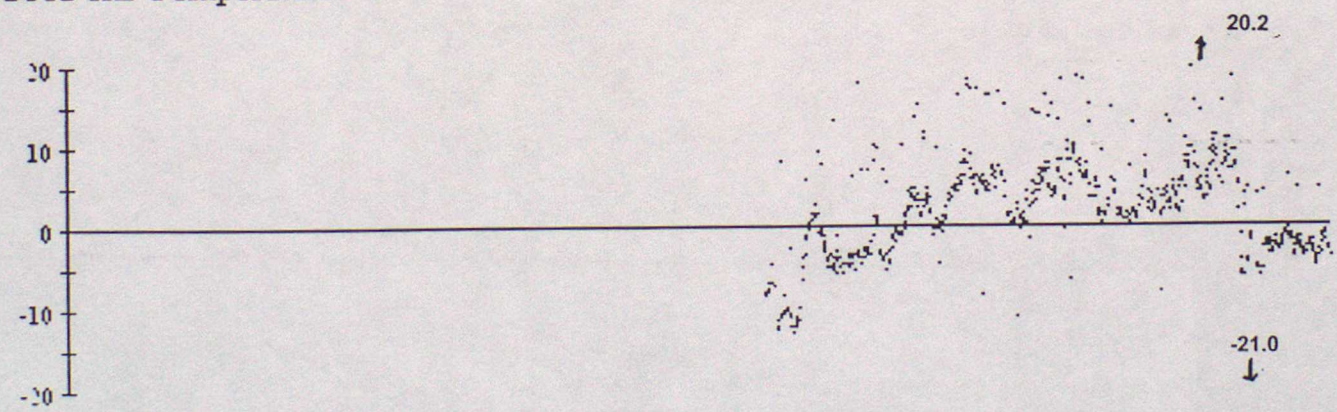
62598 Air Temperature



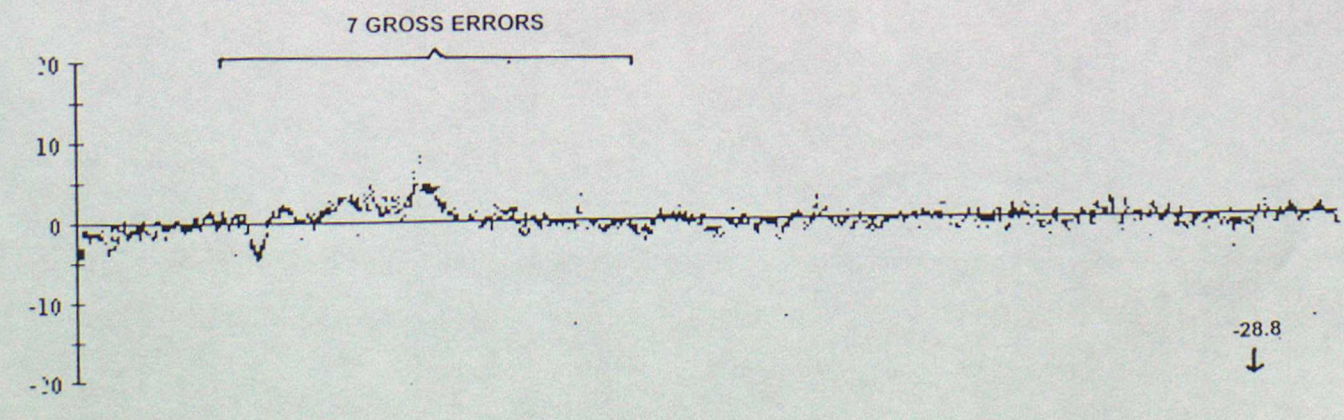
63536 Air Temperature



63663 Air Temperature

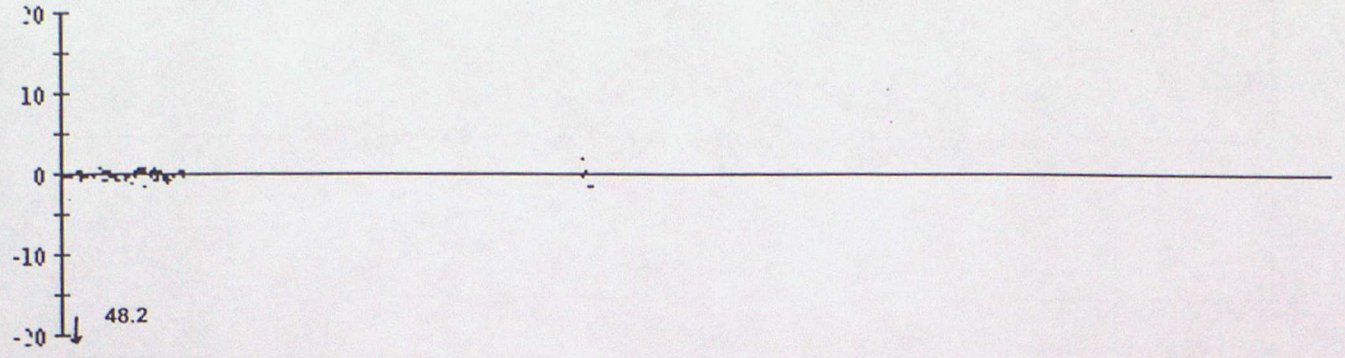


64549 Air Temperature

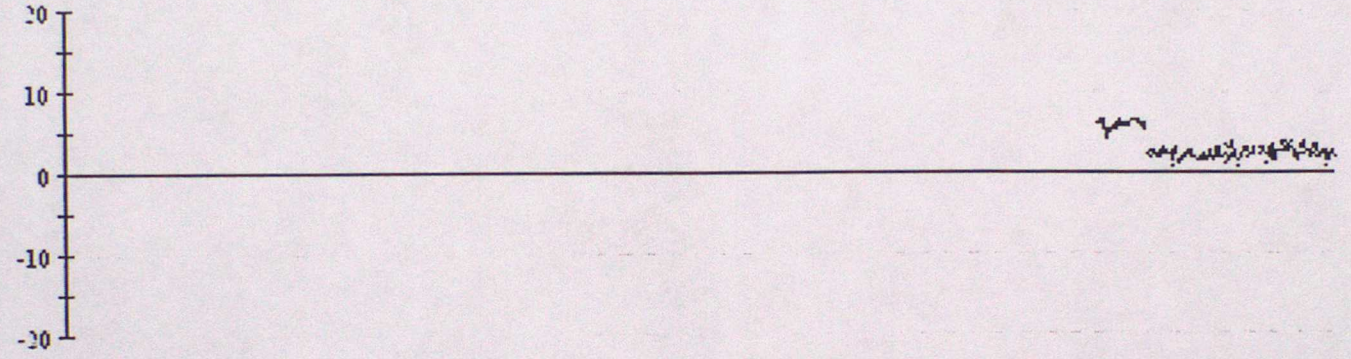


Data from 00z on 01/01/2002 to 23z on 31/03/2002 (OBS - Background field)

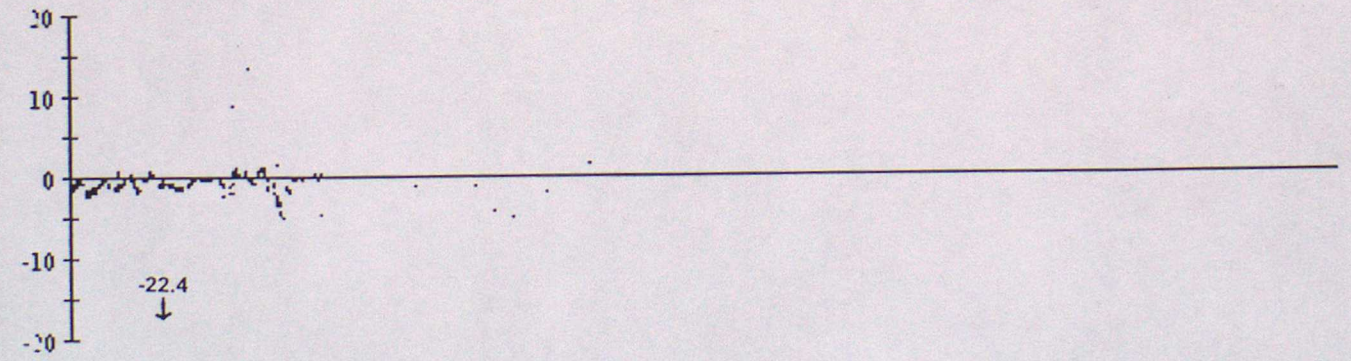
64551 Air Temperature



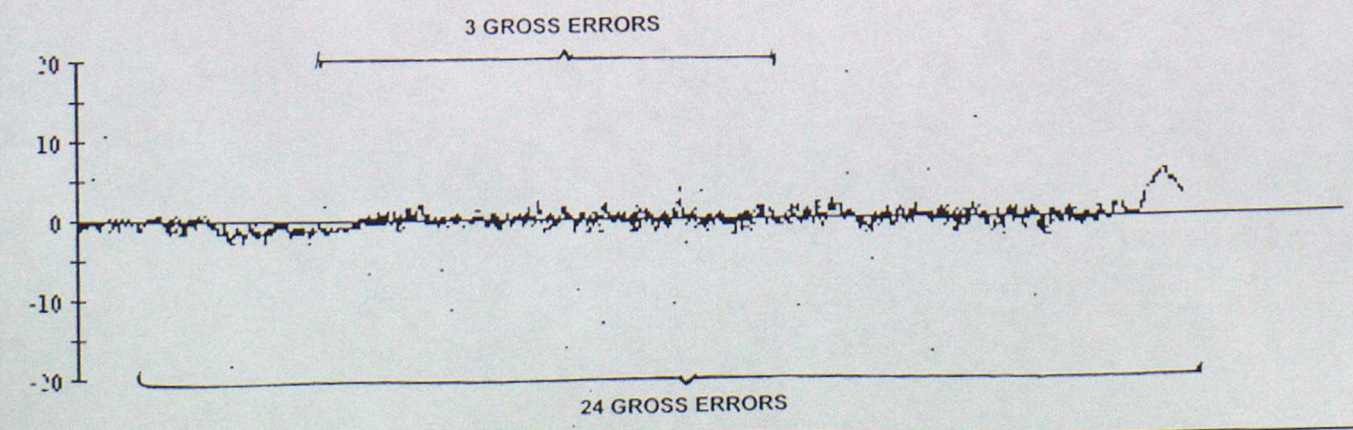
64553 Air Temperature



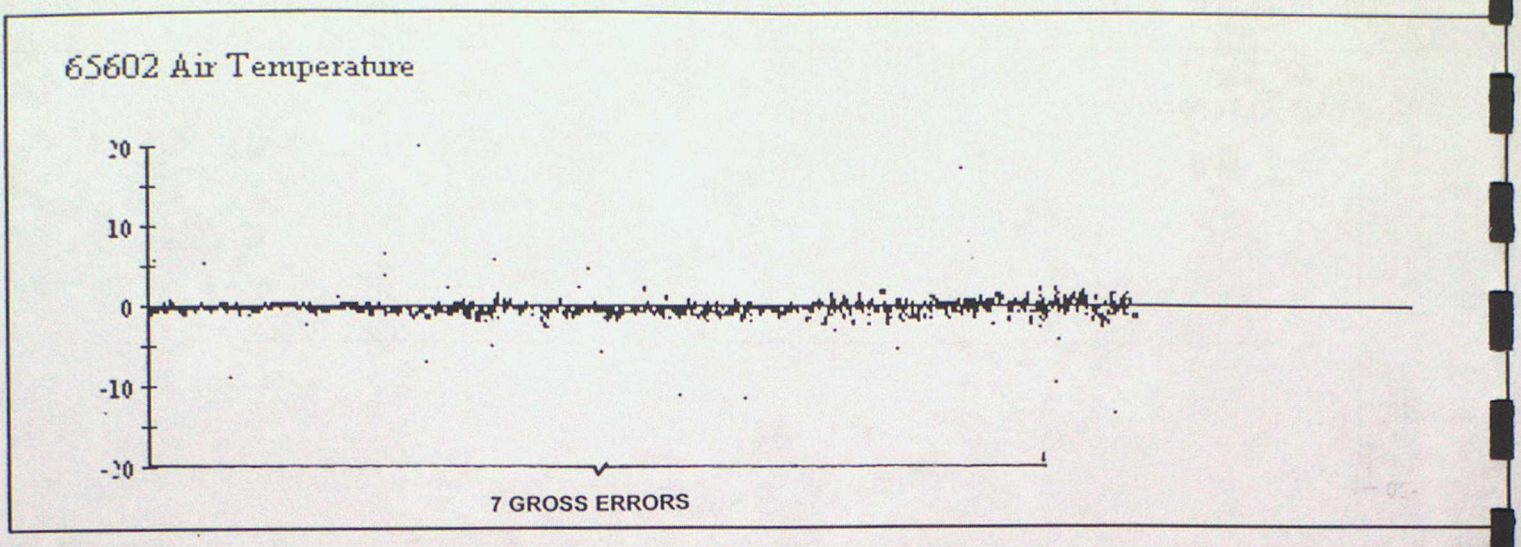
65581 Air Temperature



65595 Air Temperature



Data from 00z on 01/01/2002 to 23z on 31/03/2002 (OBS - Background field)

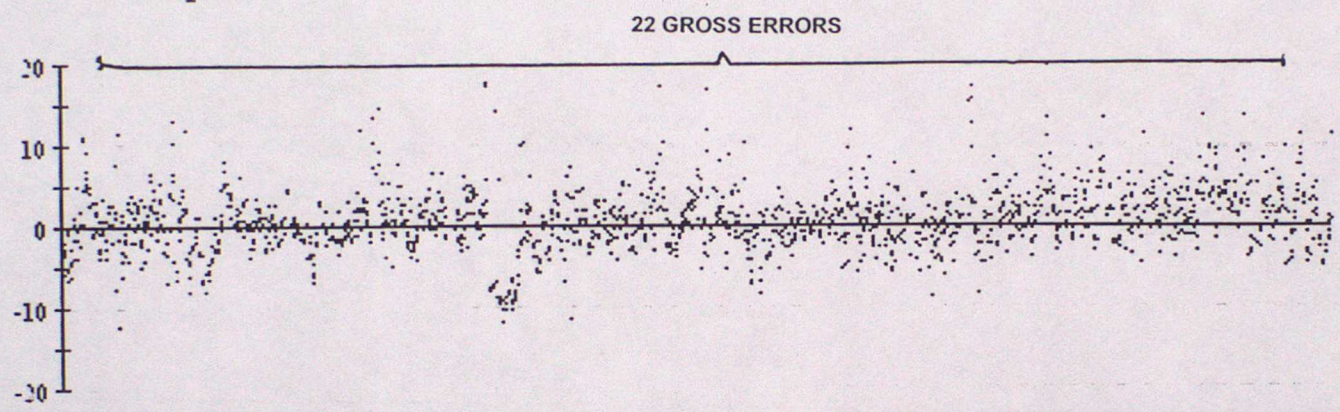


ANNEX D - TIME SERIES PLOTS OF WIND SPEED

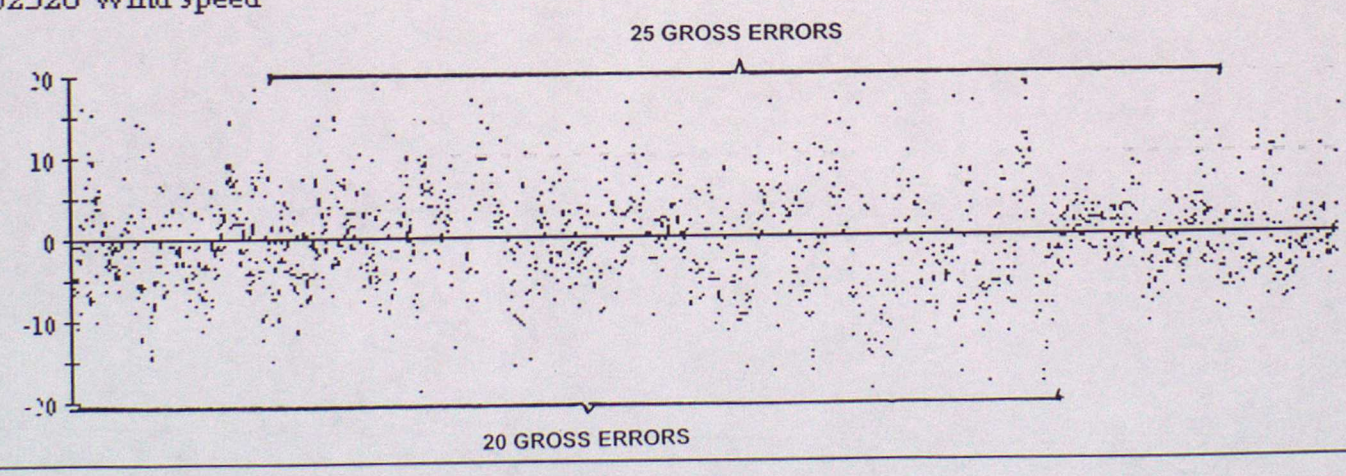
Data from 00z on 01/01/2002 to 23z on 31/03/2002 (OBS - Background field)

41523 Wind speed

41652 Wind speed



62520 Wind speed



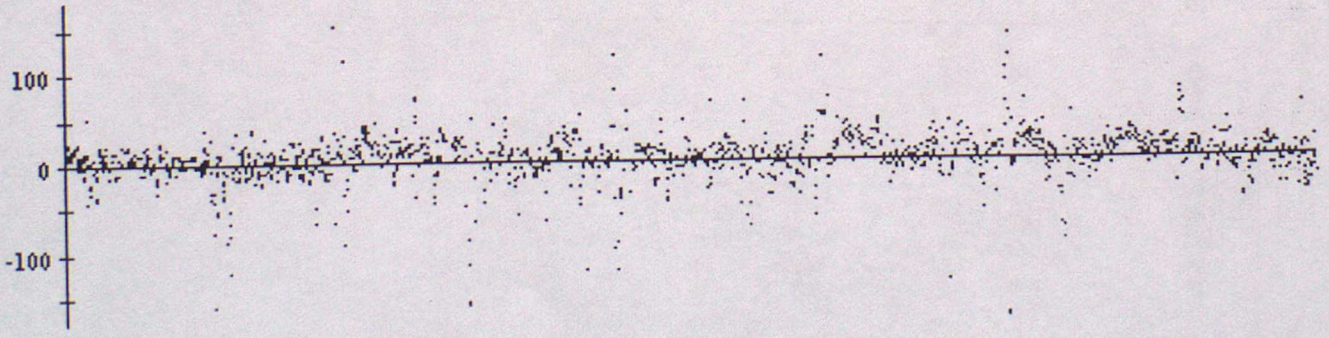
ANNEX E - TIME SERIES PLOTS OF WIND DIRECTION

Data from 00z on 01/01/2002 to 23z on 31/03/2002 (OBS - Background field)

41523 Wind direction

41652 Wind direction

62520 Wind direction



ANNEX F - SUMMARY TABLE OF OPERATIONAL DRIFTING BUOYS

WMO No.	Argos No.	Owner	Elements Reported						Reporting Period
			PP	Pt	TT	FF	DD	SST	
41523	28840	US	*			*	*	*	01/01 - 31/03
41650	7776	US	*	*				*	01/01 - 31/03
41652	7897	US	*	*		*	*	*	01/01 - 31/03
41657	27063	US	*	*				*	04/01 - 31/03
41658	27064	US	*	*				*	01/01 - 31/03
41659	27065	US	*	*				*	01/01 - 31/03
44513	28843	US	*	*				*	07/01 - 31/03
44514	28864	US	*	*				*	07/01 - 31/03
44515	28865	US	*	*				*	07/01 - 31/03
44516	28866	US	*	*				*	07/01 - 31/03
44517	28867	US	*	*				*	07/01 - 31/03
44546	25374	UK	*	*				*	01/01 - 28/02
44548	27617	UK	*	*				*	01/01 - 08/02
44549	22648	UK	*	*				*	01/01 - 31/03
44550	23703	UK	*	*				*	01/01 - 31/03
44612	27619	UK	*	*				*	01/01 - 31/03
44616	17149	UK	*	*				*	01/01 - 31/03
44621	17150	UK	*	*				*	01/01 - 31/03
44623	27624	UK	*	*				*	01/01 - 31/03
44624	17151	UK	*	*				*	01/01 - 31/03
44625	17153	UK	*	*				*	01/01 - 31/03
44627	13698	NL	*	*				*	01/01 - 31/03
44721	18702	UK	*	*				*	01/01 - 31/03
44723	21562	UK	*	*				*	01/01 - 31/03
44726	23460	UK	*	*				*	01/01 - 31/03
44728	23553	UK	*	*					01/01 - 31/03
44729	25375	UK	*	*				*	01/01 - 31/03
44730	23856	UK	*	*				*	01/01 - 31/03
44742	21667	UK	*	*				*	01/01 - 31/03
44743	4270	D	*	*	*			*	01/01 - 31/03
44760	9307	D	*	*	*			*	01/01 - 22/01
44763	17574	UK	*	*				*	07/01 - 31/03
44764	23913	UK	*	*				*	14/02 - 31/03
44765	28466	UK	*	*	*				01/01 - 31/03
44766	23914	UK	*	*				*	18/02 - 29/03
44771	25377	UK	*	*				*	01/01 - 16/02

ANNEX F - CONT'd

WMO No.	Argos No.	Owner	Elements Reported						Reporting Period
			PP	Pt	TT	FF	DD	SST	
44775	25372	UK	*	*				*	01/01 - 31/03
44776	25371	UK	*	*				*	01/01 - 11/03
44778	25370	UK	*	*				*	01/01 - 31/03
44779	6669	D	*	*	*			*	28/01 - 31/03
44780	1153	IR	*	*					19/03 - 31/03
47556	1106	CA	*						01/01 - 31/03
62501	7139	F	*	*				*	01/01 - 31/03
62503	17926	F	*	*				*	01/01 - 31/03
62504	17928	F	*	*				*	01/01 - 31/03
62512	28692	F	*	*				*	01/01 - 31/03
62516	28696	F	*	*				*	01/01 - 31/03
62518	28697	F	*	*				*	01/01 - 31/03
62519	28698	F	*	*					01/01 - 20/01
62520	32783	F	*	*		*	*	*	01/01 - 31/03
62598	2294	N	*	*	*			*	01/01 - 31/03
62694	17577	UK	*	*				*	08/01 - 31/03
62695	18000	UK	*	*				*	08/01 - 12/03
62696	18222	UK	*	*				*	08/01 - 31/03
62697	19894	UK	*	*				*	11/01 - 31/03
63536	3679	N	*	*	*			*	07/03 - 31/03
63663	9359	D	*		*				19/02 - 31/03
64549	3678	N	*	*	*			*	01/01 - 31/03
64551	6669	D	*	*	*			*	01/01 - 07/02
64552	21104	UK	*	*				*	01/01 - 31/03
64553	3038	IR	*	*	*			*	15/03 - 31/03
65581	6666	IR	*	*	*			*	01/01 - 06/02
65595	4229	NL	*	*	*			*	01/01 - 20/03
65602	6667	IR	*	*	*			*	01/01 - 12/03